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JULY 1986

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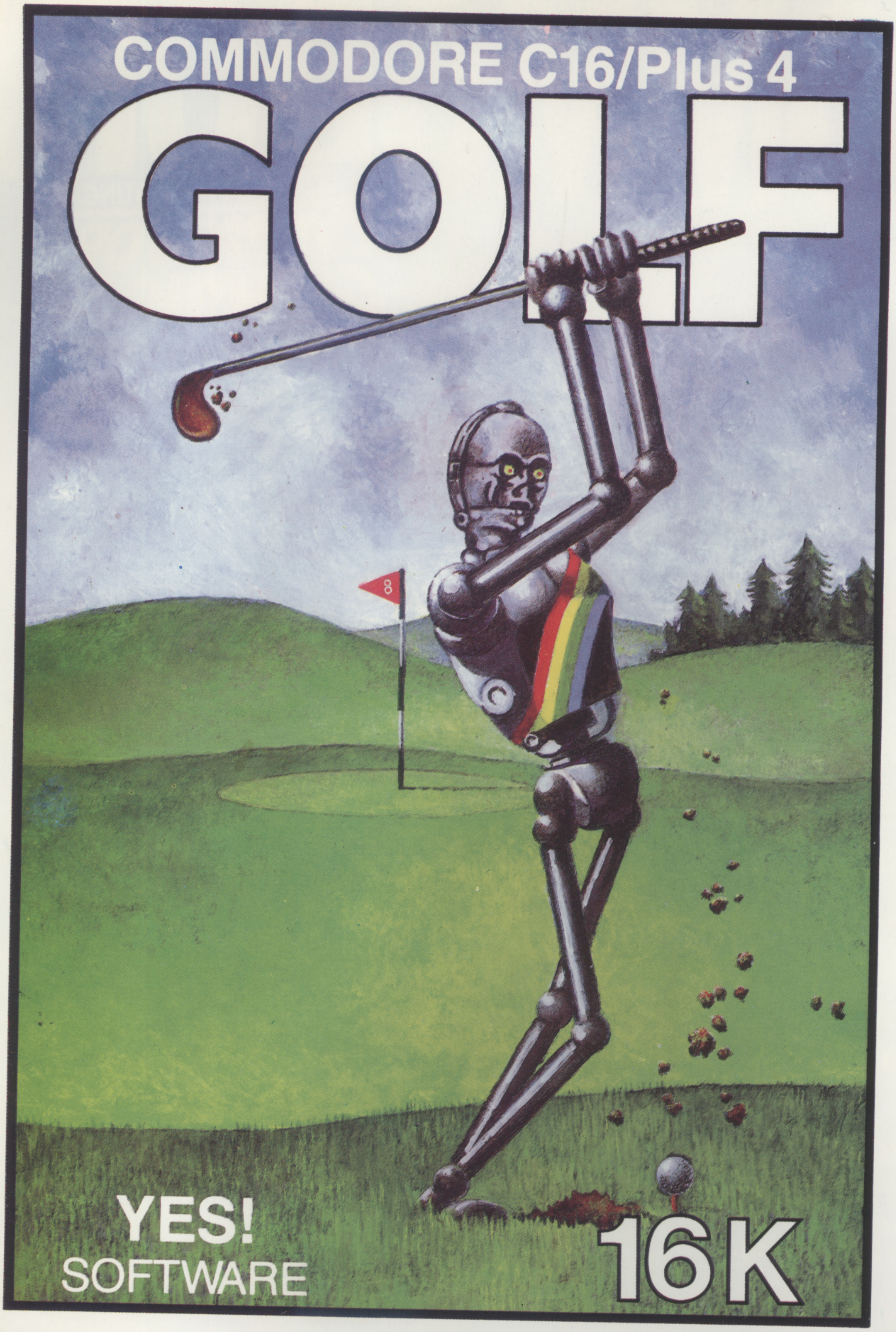
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Probably the best Commodore magazine in the universe says "Welcome aboard, Horizons Readers!"

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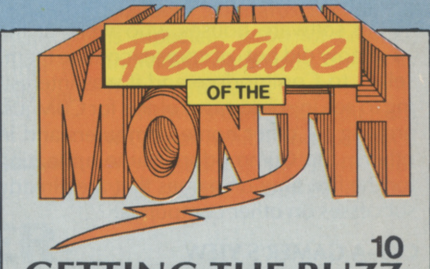

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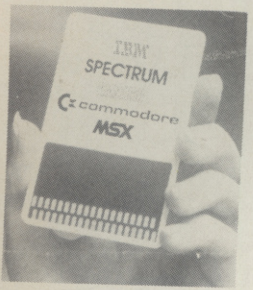

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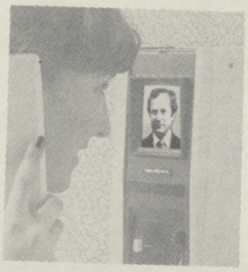


CES
Consumer Electronics Show – the first of its kind in the UK was far from an equal in size to the famed U.S. equivalent. CES is not for the public, but a trade show at which, supposedly, the latest electronic gadgets or appliances are shown to the wholesalers or retailers who may prove delighted, or reluctant, to pass them along the selling lines to the public. Interested on your behalf in whatever is new, CCI wangled an invitation to get a first look at what you might just find in your shops in the months or even years ahead.

The software houses who were at the Show did not, of course, confine themselves to Commodore and it was interesting to see in some cases oldies for CBM just arriving for other home computers and in others, the Commodore name appearing for the first time on games that are already successes on other computers.

CES -A GAMER'S VIEW

Games companies managed to create quite a stir with some new and exciting products. Jeff Minter, Llamasoft's Hippy supremo, demonstrated using his newly aquired 8 foot screen and giving very lively shows of Colourspace, but I'm assured it should soon be done on the AMIGA. He was also showing a preview of his newest game for the 64 IDRIS-ALPHA.

Mirrorsoft were showing a nearly completed version of Biggles (who's Big Les? someone asked), which promises to combine Arcade/Adventure/Strategy elements to create a very good-looking game.

Interceptor Micro's were showing their new range of budget games, called PLAYERS. Durrel showed 'Saboteur' on the Spectrum, and I was promised it would be ready for release on the 64, very soon!

Overall, a good show for gamers, one which bodes well for 64/128 games in 1986.

An interesting idea that had not previously reached our notice is Bulletin 1000, which distributes on video cassette software promos to 500 UK computer shops. It keeps the shops' customers up to date on what's new on the software scene. Telephones are in – the Inphone from BT, of course, and lots more in all colours shapes and sizes from many companies. But does anyone really want a telephone shaped like Mickey Mouse and standing 50cms high?

Very big now, in size as well as interest, is satellite TV. The dishes dominated one corner of the show and drew crowds to see the eight screens of live programmes - by satellite, of course, coming from different countries around the world.

There were interesting joysticks, including some from Cheetah and a striking new 'designer' cassette storage unit from Fischer. There were a number of very hi-fi loudspeaker systems, amongst which was the Bose Point 2 series; really high performance billed as 'the most sociable stereo yet.' Don't ask us what that means, but it was a great sound. We were attracted to the stand of Lightning (a Commodore distributor) by the really marvellous music. Surprise, surprise, it was coming from one of the new Commodore 64 Music Expansion Systems linked to - another surprise - a 128 D. Why, we asked, a 128D supposedly a business machine? Nobody could tell us. But, they said reasonably enough, it works, doesn't it? It certainly did.

So did CCI's new columnist, the legendary Hairy One, Jeff Minter. He was demonstrating non-stop his 'Colourspace' and crowds, as always, surrounded him and his charming, unbelievably-young, mother Hazel. He also was making a sensation with his C16 version of Matrix (reviewed this issue CCI).

Spectrum distributors were showing the extraordinary Citizen 560 dot matrix printer for Commodore machines. At under £50 (UK), it must be the most economical on the market (see review in this issue of CCI).

On the Portasun stand, there was a delightful girl being suntanned. Unfortunately she was not a free sample.

The Future Is Now

- Three 21st century products.

Astron Softcard

The Astron Softcard - An extraordinary Japanese solid state memory device, from Electric Software. The size of a credit card, extremely compact, long lasting and, it is claimed, totally pirate proof. It has a chip buried in its slim interior and is promised to be used for Commodore games and other programs by July. It slots into an interface (estimated price, £14.95) plugged into the user port of a 64 or 128. Lightning fast in loading, it is light and looks an exciting development to watch. The main drawback: presently games will cost around £15. Neverthless many French, Spanish and other European software companies are already adapting their titles to Softcard.

THE VIDEO DOOR VIEWER

Now, you don't just look through the spyhole in the door to find out if your visitor is unwelcome. Your doorbell can be a part of the Geemarc Video Door Viewer - really a miniature video camera that automatically - and without making itself obvious generates video pictures on a small monitor screen over your phone. The handset is linked to a microphoned speaker unit. As city streets become less safe, more and more is your home to be your highly protected castle...

Big Audio Dynamite

If you'd really done your homework, you'd probably have popped over to Singapore months ago to pick up your own cordless headphones before *everyone* on your street had a pair.

Costing £69, they are light, comfortable and allow you freedom of movement while using your t.v., hi-fi or computer monitor.

Operating via a small transmitter unit, these headphones receive an infra-red beam through a built-in sensor. The transmitter is compatible with standard headphone sockets and operates over an area of 800 square feet. Any number of sets within this range will pick up the signals. A single PP3 battery will supply you with over 100 hours of unadulterated sound. With a mere 239 shopping days left before Xmas, start hinting .... *loudly*.

...news ...news ...news ...news

FOXY WOMAN

Martech's recently launched Samantha Fox game really has caused a stir! Labour MP, and spokesperson for Womens Affairs, Jo Richardson has written to David Martin, MD of Martech in an attempt to get him to withdraw the game.

Apparently David Martin sees it all as "just good fun", Ms Richardson however describes it as "thoroughly degrading to women". It seems very unlikely however that the game will in fact, be withdrawn, as it is selling very well.

More on the Sam Fox scene. Apparently, such was the interest in the game at a recent Birmingham exhibition that the computers displaying it exploded!!!

GREEN FINGERS

Gardeners who also happen to have a home computer will be pleased to hear that their two hobbies can now be combined. The Planter's Guide Pack, from Phoenix Publishing, will allow people to choose from over 1000 plants, suitable for planting in the garden.

Budding Percy Throwers can get more details by telephoning 0923-32109.

HACKER STOPPER

More and more people are turning from electronic mail to telex as a result of the recent prosecutions of two Hackers who managed to access the Duke of Edinburgh's Telecom Gold mailbox. As telex uses its own network, it is hack-proof, whereas Mailboxes are permanently stored and therefore relatively easy to enter, even if you are unauthorised.

CORBY FOR SALE

Commodore has confirmed to C.C.I. that its Corby plant is up for sale. The building is now too large for Commodore's needs since the ending of the assembly of computers there. The plans of Commodore for its future location depend on the conditions of the sale of the building. If only part of the site is sold, Commodore may remain in Corby. As a company, involved nationally, and now fundamentally a marketing organisation, Commodore is not tied to any particular geographical area.

It is believed that the UK Department of Trade and Industry is pressing Commodore to return the grants, reportedly over £2 million, that it received when it originally set up in Corby.

TWO FOR ONE

Dacom System's Dataphone is a new and excellent idea. It is a phone, but not just an ordinary phone, it combines a full range of telephone functions with a built in 1200 baud half duplex modem. Connection is by a standard RS232 interface, and the Dataphone costs £245.

HARD CARD

Mountain Computers have recently announced a 30Mbyte DriveCard 30, which apparently incorporates two 3.5 inch drives. It fits into any of the expansion slots on the more recent PC compatibles.

The beauty of the system is that not only does in configure itself automatically, but there are no power cables or bulky boxes. Contact Entre on 01-831 0311.

CLAM UP

A new system called CLAM has been designed to make PC systems much safer, especially those who use hard disks. CLAM replaces the usual MSDOS prompts with various menus and user logs, which require passwords to let them into the system. Only certain passwords will allow you all the way into the computer, others would have limited access.

For more details contact Microft Technology on 01-948 8255.

128 INTERFACE

Cascade Games have announced a 128 monitor lead that allows the 128 to use a monitor other than the Commodore 1901. In this case you can use the Microvitec 1431 range of monitors. The monitor can display all three modes - 40 column 64, 40 column 128, and 80 column 128. Cascade can be contacted on 0423-504526.

POPULAR LASER

Laser printers are apparently so popular that dealers are having to accept delays of up to ten weeks for orders. Hewlett-Packard are selling the most lasers, with upwards of 1000 per month, Canon, who provide the internals for both Hewlett-Packard and Apple are selling 500 per month, a spokesperson said.

AMIGA HOPE

A recent group of market studies have revealed that demand for microcomputers in the £650-£1700 price range will increase by two and a half times in the next two years. Many of these sales are expected to be in the educational market, but it bodes very well for the Amiga, which should fit in perfectly.

GOOD MUMPS

MUMPS can be good for your PC! In this case MUMPS is a language, Massachusetts general hospital Utility Multi-Programming System, and is recommended by the American National Standards Institute. It is especially good for creating individual databases, due to its highly structured design.

MUMPS can be bought from MGlobal (which sounds much more serious) for £149 plus VAT. Contact them on 01-568 2621

CP/M FOR IBM

Users who wish to run CP/M software on an IBM PC or compatible will be pleased to see that CAD systems of Milton Keynes have released Accel 8/16. The system comes complete with a set of chips, software to emulate CP/M, and software to enable the PC to read other disk formats.

It is claimed that this system runs at up to three and a half times the speed of previous comparable emulators, and costs only £140 plus VAT. Contact CAD on 0908-662759

CRAY ON THE WAY?

Cray Supercomputers are no longer the undisputed greatest computers in the world. The Columbian Homogeneous Parallel Processor (CHoPP) was developed in New York's Columbia University and the founder has now got full financial backing to complete and market the design by 1987.

Priced on a par with Crays at around $10M, the company now has Lee Higbie, who helped develop the Cray XMP has joined CHoPP as a senior vice president.

Anyone got a spare $10M?

FREE GOLD

Unfortunately not the metal type! Purchasers of Hayes new Smartmodem II or Smartcom II software are to receive a free Telecom Gold mailbox. To get hold of one of these modems contact Hayes on 01-847 4471.

PC CONVERTIBLE

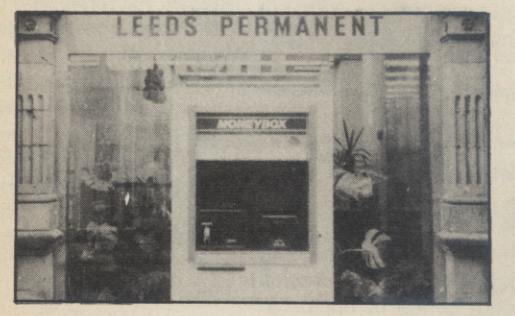
IBM's recently announced portable, the PC Convertible, is one of the first products to be produced by a new system of Robots in Austin, Texas. Big Blue have denied all rumours that they had no staff left!

FOOD FOR THOUGHT

Link Interchange, the network organisation for banks and building societies in the UK are increasingly using computerised teller machines to supply their customers with cash. The building society's cash network, Link, has been talking to Sainsburys and ASDA, the high street food chains, about installing automatic teller machines (atms) in their shops. In the US, 50% to 60% of cash machines are in stores.

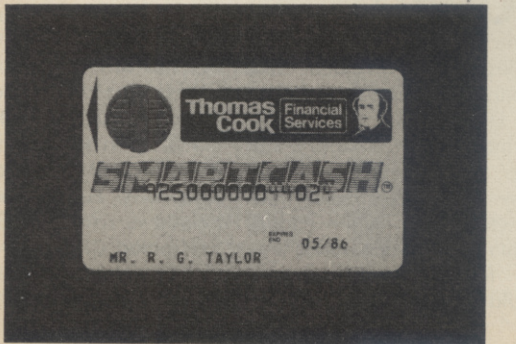
However according to Link, putting ATMS into food stores may be asking for trouble. It seems that customers irate at delays and errors may well use the foods near at hand as ammunition to express their dissatisfaction. Link reports that the Leeds Building Society has had its machines bombarded with jam dougnuts while bank's machines have been attacked with ice-creams and tomato sauce.

Even worse, there are reports of machines being stuck with super glue. Some people have taken their aggressive instincts a stage further by damaging two bank's machines at one go by stuffing one bank's machine with another bank's card. A case of up and ATMS?



SMART COOKIES

Thomas Cook, the world's largest travel company, with a computerised network of 1500 offices in 140 countries, has announced a new 'Smartcash' card that will challenge American Express and Diner's Club. Working with major banks, the cash card will, it is claimed, be usable at over 4.5 million 'through the wall' acceptance points around the world. Anyone seeing 'Smartcard' machines in Australia dripping with Kangaroo tail soup or oozing with whale blubber, might request the Cook's recipe ...



Softworld

We hear that its often very difficult for CCI readers to get the software, especially games, that they read about in the magazine. Retailers simply do not stock everything we cover. So it's very good news to hear of a brand new mail order software company, Softworld, which promises to be of an outstanding importance to anyone who has difficulty getting everything they want. Softworld has already tremendous catalogue of all the big names.

It ought to be a real expert in the Commodore market, as it is the brainchild of none other than Paul Welch, until recently Marketing Manager of Commodore UK itself. For over 5 years, Paul Welch was Commodore's consumer products King and he has turned that experience and knowledge into creating the new Softworld mail order service. Anyone interested in finding out what Softworld is all about contact Paul Welch himself.

Contact: SoftWorld (U.K.) Ltd, 59 Corporation St, Corby, Northamptonshire NN17 1NQ

COMPETITION RESULTS

COMMODORE SHOW C128 COMPETITION
Clare Smith

MODEM/MICRONET SUBS
T Cobbe

WORDPROCESSOR
Nial Maher

POWERFUL BOOK
A Affat

THE FORCE
C Collier-Woods

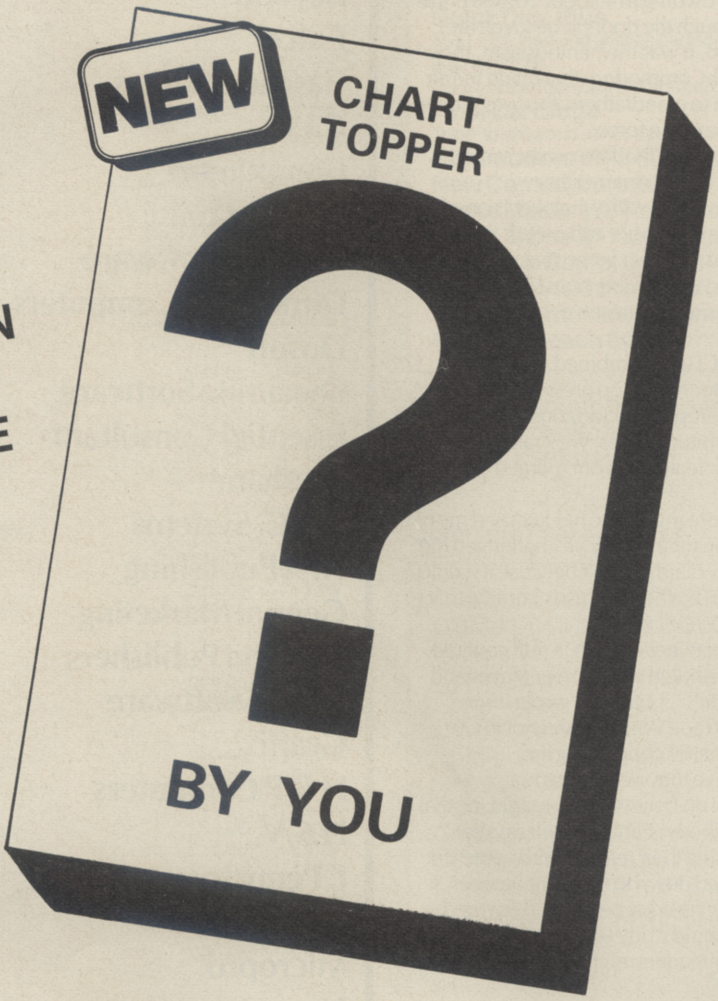
ADVANCED COMPUTER GUIDE
D Steer

BIOLOGY COURSE TUTOR
S Clint Brookes

SWEATSHIRT COMPETITION
1st Daniel Davies
2nd Ron Todd

CITIZEN/BUSINESS COMPETITION
Capt NJR Attwood
H J Josephs

COULD THIS BE YOUR PROGRAM?



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P.S: We are also looking for 6502/Z80 programmers for urgent conversion work.

CCI View

Dear Reader,

Shows add an extra, glamorous dimension to our lives. Like all show business, they are – even computer shows – exciting and slightly unreal. The just finished Commodore Show was fun. There were masses of people, hugely enjoying themselves, buying up everything. The companies who supply the Commodore market got to meet their customers in person – and in cash. It gave everyone a 'buzz'.

For me, the AMIGA was not the star of the show, nor was the software available. There was little you could not find in the pages of CCI. There were very few major developments launched at the Show in peripherals either. For me the real impact came from the Commodore people who came crowding in – about 20,000 is the estimate of those who hurried through the doors to be given the free Guide to the show CCI created. It was their enthusiasm, their excitement, their hunger for things Commodore that made the air crackle alive. From small children to grandfathers, this was where the enthusiasts were and they were out in force.

Many people hardly see another Commodore owner except perhaps their own friends. To mix with so many other Commodore owners, to come in contact with whatever is on offer to make your computer even more enjoyable and useful, that is what makes it all worthwhile. What is rather surprising is that some of the major names, even those really big ones like US Gold and Ocean, did not find the enthusiasm themselves to come and meet their Commodore market.

This was the first show where CCI was combined with Commodore Horizons, as we announced stop press in our last issue. We found a great deal of interest from Horizons readers and as everyone will see from this and future issues, we shall be including many of its most popular features in our merged magazine.

A final note. Another Commodore magazine has accused me of launching 'a blistering attack' upon them. They've challenged me to make my remarks 'public'. They claim I won't because it would be like having, as they put it, 'a lion by the tail', also claiming that I have insulted their readers!

I admit I did write that some magazines are like 'a fluff covered lollipop' and that they should be handled with rubber gloves and fire tongs for fear of contamination . . . I certainly wrote it publically enough in "Computer Trade Weekly" and not in CCI, because I was commenting on a matter concerning the Commodore market which I believe they are damaging.

I stand by every word I said, for I do believe that a magazine that exploits its readers damages everybody. Further, I will say that such magazines are in reality treating their readers with contempt and are a waste of the trees chopped down to make their paper. If they don't want their magazines accused of being 'fluff covered lollipops' in style, perhaps they should study CCI with attention, the kind of respect we have for our readers might rub off on them.

Yours sincerely,
Antony H. Jacobson Publisher

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Easyspell	~~£50.00~~	£19.95
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Commodore 64 Programmers' Reference Guide	~~£9.95~~	£7.50

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Practicalc (Spreadsheet), Tape	~~£39.95~~	£9.95

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Sales Ledger*	£99.95

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The Trojan Cad Master package combines a top quality light pen with superbly designed graphics software.

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MS2000 Mouse Disc	~~£68.40~~	£59.95
Quick Disc Plus 1541 fast-load and utilities cartridge		£19.95
Sprint 128 C64/128 centronics interface cartridge		£29.95
Final Cartridge Tape-to-disc and utilities cartridge		£45.00
Commodore MPS 803 Tractor Feed		£24.95
New Commodore 64/128 Modem		£79.95
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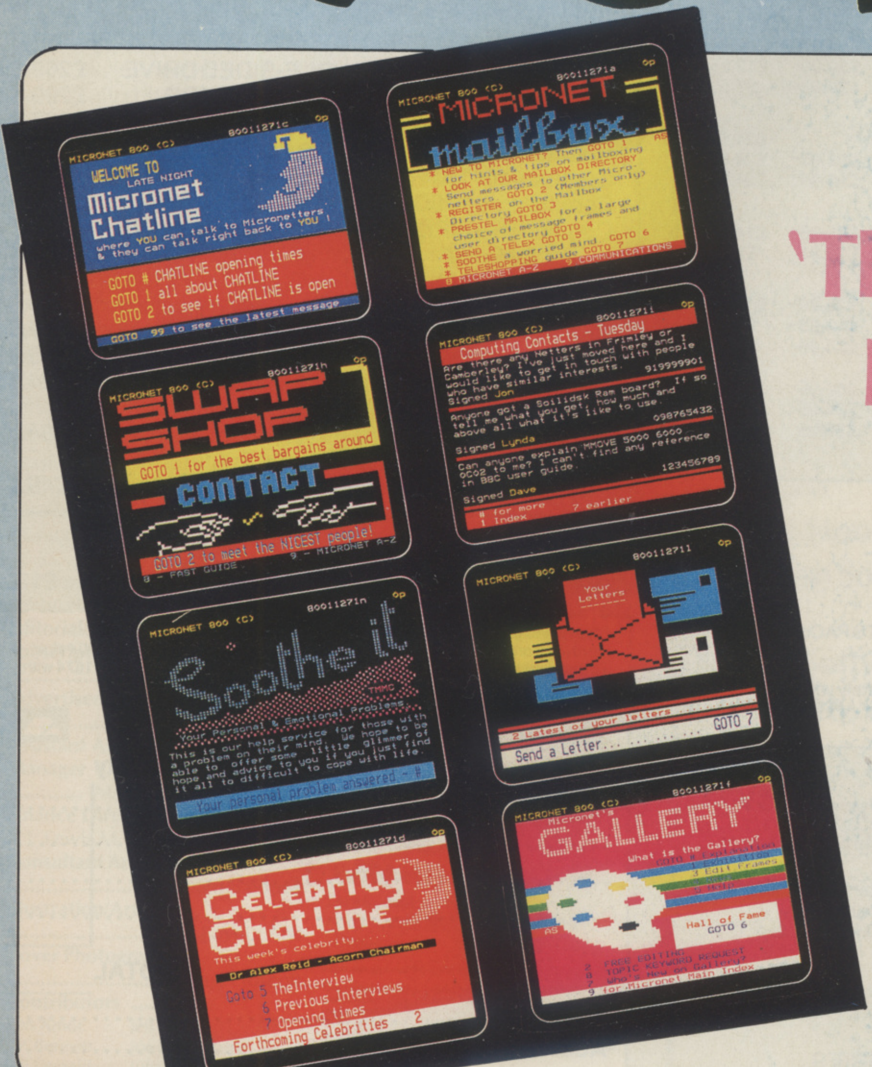


```
MICRONET 800 (C)          80011271c    0p
WELCOME TO
      LATE NIGHT
Micronet
Chatline
where YOU can talk to Micronetters
& they can talk right back to YOU !
GOTO # CHATLINE opening times
GOTO 1 all about CHATLINE
GOTO 2 to see if CHATLINE is open
GOTO  99 to see the latest message
```

```
MICRONET 800 (C)          80011271h    0p
SWAP
SHOP
GOTO 1 for the best bargains around
CONTACT
GOTO 2 to meet the NICEST people!
8 - FAST GUIDE          9 - MICRONET A-Z
```

```
MICRONET 800 (C)          80011271n    0p
Soothe it
TMMC
Your Personal & Emotional Problems
This is our help service for those with
a problem on their mind.  We hope to be
able to  offer some  little  glimmer of
hope and advice to you if you just find
it all to difficult to cope with life.
Your personal problem answered - #
```

```
MICRONET 800 (C)          80011271d    0p
Celebrity
Chatline
This week's celebrity.....
Dr Alex Reid - Acorn Chairman
Goto 5 TheInterview
     6 Previous Interviews
     7 Opening times
Forthcoming Celebrities    2
```

```
MICRONET 800 (C)          80011271a    0p
MICRONET
mailbox                              AS
* NEW TO MICRONET? Then GOTO 1
  for hints & tips on mailboxing
* LOOK AT OUR MAILBOX DIRECTORY
  Send messages to other Micro-
  netters  GOTO 2 (Members only)
* REGISTER on the Mailbox
  Directory GOTO 3
* PRESTEL MAILBOX for a large
  choice of message frames and
  user directory GOTO 4
* SEND A TELEX GOTO 5
* SOOTHE a worried mind  GOTO 6
* TELESHOPPING guide GOTO 7
8 MICRONET A-Z        9 COMMUNICATIONS
```

```
MICRONET 800 (C)          800112711    0p
  Computing Contacts - Tuesday
Are there any Netters in Frimley or
Camberley? I've just moved here and I
would like to get in touch with people
who have similar interests.   919999901
Signed Jon
Anyone got a Soilidsk Ram board?  If so
tell me what you get, how much and
above all what it's like to use.
                              098765432
Signed Lynda
Can anyone explain MMOVE 5000 6000
0C02 to me? I can't find any reference
in BBC user guide.
                              123456789
Signed Dave
  # for more      7 earlier
  1 Index
```

```
MICRONET 800 (C)          800112711    0p
Your
Letters
2 Latest of your letters ............
Send a Letter... ... ... ...    GOTO 7
```

```
MICRONET 800 (C)          80011271f    0p
Micronet's
GALLERY
               What is the Gallery?
             GOTO # Explanation
                  1 Exhibition
                  3 Edit Frames
                  4 News
                  5 Help
AS                   Hall of Fame
                       GOTO 6
2  FREE EDITING
8  TOPIC KEYWORD REQUEST
7  Who's New on Gallery?
9  for Micronet Main Index
```

'The Ultimate peripheral'

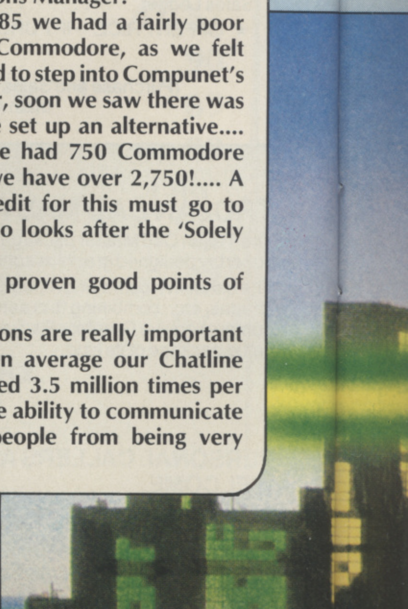
MICRONET

Micronet has been around for three years, and in that sense it is the father of the recent generation of home user-orientated on-line databases. To find out more about Micronet I went to see Peter Probert, Public Relations Manager.

"In August 1985 we had a fairly poor service for the Commodore, as we felt there was no need to step into Compunet's market. However, soon we saw there was a demand, so we set up an alternative.... One year ago we had 750 Commodore Members, now we have over 2,750!.... A great deal of credit for this must go to Andy Waller, who looks after the 'Solely 64' area."

What are the proven good points of Micronet?;

"Communications are really important to Micronet... On average our Chatline pages get accessed 3.5 million times per month!...I feel the ability to communicate stops a lot of people from being very lonely"



connect

Why do you think Compunet members are joining Micronet?;

"Compunet has basic problems, it's expensive, limited and difficult to use... and it takes a long time to log on"

You have a Multi User Game, how is that going?;

"Starnet is amazingly popular... so popular that we are considering setting up another MUG."

Many people consider you an 'On-line magazine', what do you feel about that?;

"Well, we like to try and break computer related news first, as in the trial of Steve Gold, which we covered in great detail....Many people refer to our news pages, including the Guardian... Our editorial staff of seven also puts the Sunday magazine together."

Will you be starting up anything for the Amiga?;

"We are entering a new phase, as is the market in general, and to show this we have taken on the services of a company called Interlex who will, for a small fee, answer any technical queries, or give on site help."

You have a celebrity chatline, how is that doing?;

"Last month it was accessed 128,348 times... At the Commodore Show we had an interview with Rick Wakeman from CCI's stand...We try to get people that will interest our subscribers, that has included Feargal Sharkey, Paul Daniels and Hugo Cornwall."

Specially for CCI readers, Peter Probert has kindly offered the Mustang software (that allows you to access Micronet with a Compunet modem) FREE (normally it sells at £8) to the first 50 people who write to the Micronet Offer, care of CCI

'Your personal passport to the world of communications'

MICROLINK

Microlink is the fastest growing of all the electronic mail services around at the moment, but unlike most of the more well known systems; Telecom Gold (of which Microlink is a sub-section), One-to-One, etc, it offers a whole lot more. To find out more about this system I spoke to Derek Meakin, head of Database Publications and a great advocate of Microlink, to find out what were his aspirations for the system.

Firstly I asked him about any Commodore specific areas;

"Previously we have been pushing it towards other markets, the BBC, Atari, Apple, etc, now however we will be aiming it much more towards our Commodore subscribers.... Although we have quite a few CBM members, we decided that we need a area specifically for them, so we are setting up a Closed User Group (CUG)..... To do this successfully we will

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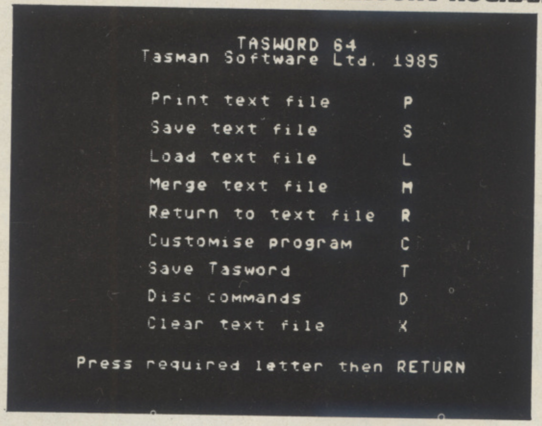
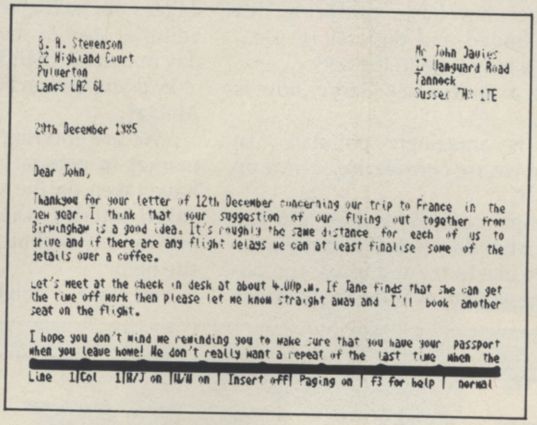


```
            TASWORD 64
   Tasman Software Ltd. 1985

      Print text file        P
      Save text file         S
      Load text file         L
      Merge text file        M
      Return to text file    R
      Customise program      C
      Save Tasword           T
      Disc commands          D
      Clear text file        X

  Press required letter then RETURN
```



```
J. A. Stevenson                                              Mr John Davies
22 Highland Court                                            17 Vanguard Road
Pulverton                                                    Tannock
Lancs LA2 6L                                                 Sussex TN3 1TE


20th December 1985


Dear John,

Thankyou for your letter of 12th December concerning our trip to France  in  the
new year. I  think  that  your  suggestion  of  our  flying  out  together  from
Birmingham is a good idea. It's roughly the same distance  for  each  of  us  to
drive and if there are any flight delays we can at least finalise  some  of  the
details over a coffee.

Let's meet at the check in desk at about 4.00p.m. If Jane finds that she can get
the time off work then please let me know straight away and  I'll  book  another
seat on the flight.

I hope you don't mind me reminding you to make sure that you have your  passport
when you leave home! We don't really want a repeat of the  last  time  when  the
Line   1|Col   1|R/J on |W/W on | Insert off| Paging on | f3 for help |  normal
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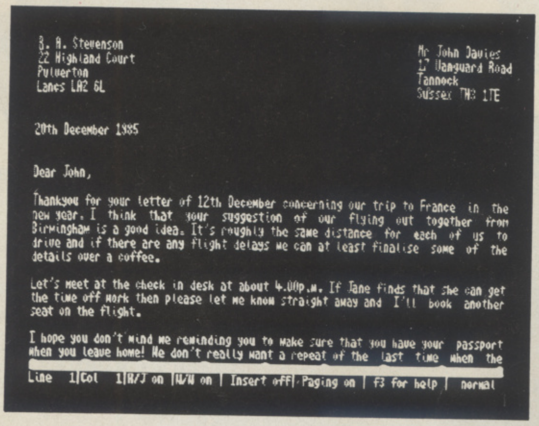

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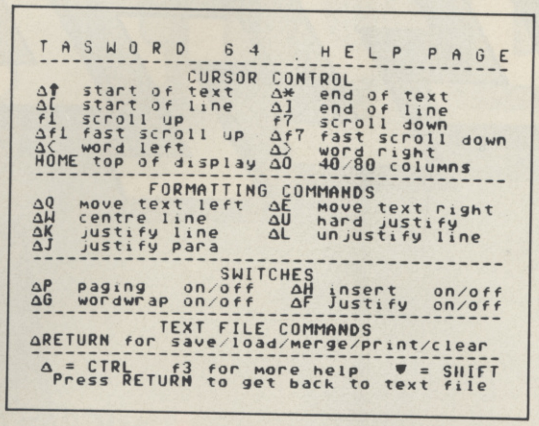

```
T A S W O R D   6 4  . H E L P   P A G E
----------------------------------------
            CURSOR CONTROL
Δ↑  start of text     Δ*  end of text
Δ[  start of line     Δ]  end of line
f1  scroll up          f7  scroll down
Δf1 fast scroll up    Δf7 fast scroll down
Δ<  word left         Δ>  word right
HOME top of display   Δ0  40/80 columns
----------------------------------------
          FORMATTING COMMANDS
ΔQ  move text left    ΔE  move text right
ΔW  centre line       ΔU  hard justify
ΔK  justify line      ΔL  unjustify line
ΔJ  justify para
----------------------------------------
               SWITCHES
ΔP  paging   on/off    ΔH insert  on/off
ΔG  wordwrap on/off    ΔF Justify on/off
----------------------------------------
          TEXT FILE COMMANDS
ΔRETURN for save/load/merge/print/clear
----------------------------------------
 Δ = CTRL   f3 for more help    ▼ = SHIFT
  Press RETURN to get back to text file
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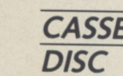

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need plenty of input from CBM User."

What are the advantages of Microlink over Telecom Gold?;

"Telecom Gold is very impersonal, with MicroLink we have tried to make the system much more user friendly... Gold is aimed much more at Corporate users, and they are different to the micro-user/ enthusiast which MicroLink caters for."

What will MicroLink introduce?;

"I have already mentioned the Commodore CUG, but we will also be bringing in conferencing, as with the American Database-Compuserve, where up to twenty people can sit around chatting about whatever interests them.... We will also be developing more into the small business sector... For the micro enthusiast we aim to see a considerable increase in Telesoftware online"

In what ways is MicroLink different to the other well known on-line databases?;

"In most respects we are unique... Because we have a scrolling screen, unlike Micronet's single frames we can provide things Micronet can't.... Unlike all the other systems, we provide many services that save both time and money, take Telemessages; we can let our users send a 350 word Telemessage, that is guaranteed to arrive the next day, for £1.55, where dictataing it over the phone would cost more than £15!... Send-ing flowers, booking theatre tickets, reserving train seats, all this and much more can be done through MicroLink."

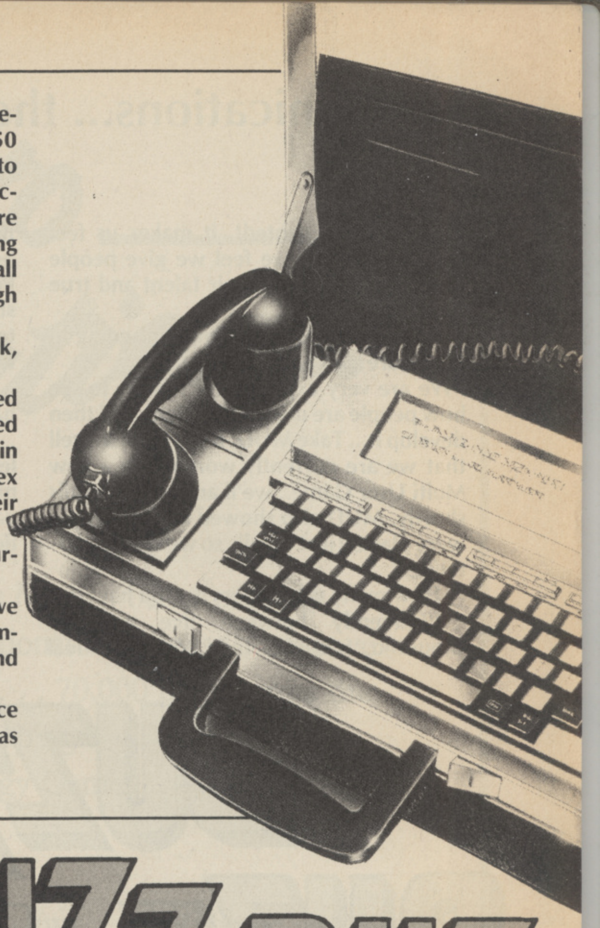
Telex is an important part of MicroLink, how successful is it?

"More than half the people who joined MicroLink paid the small fee to be allowed to send telexes... We have subscribers in Tokyo who find it cheaper to send a Telex to a friend in Tokyo via us than using their own system!"

Finally, what do you see as the main purpose for MicroLink?;

"It is an electronic mail service, but we believe that apart from being useful, communications should be entertaining and fun"

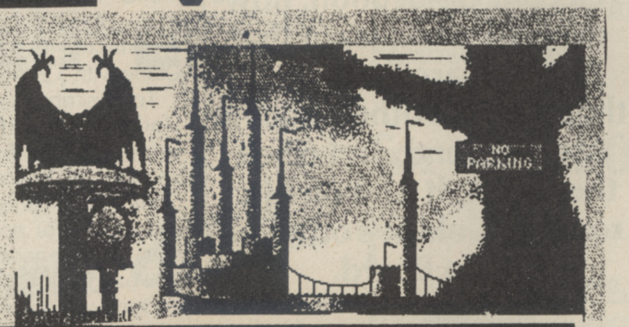
CCI will shortly be providing a service Commodore MicroLink, so for any ideas or queries, mailbox us on MAG042.

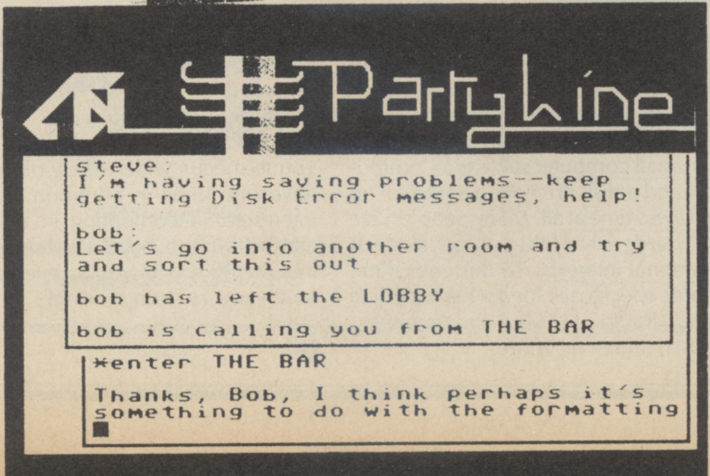


BUZZ BUZZ BUZZ BUZZ

Log on to the Live One!

compunet





```
steve:
I'm having saving problems--keep
getting Disk Error messages, help!

bob:
Let's go into another room and try
and sort this out

bob has left the LOBBY

bob is calling you from THE BAR
*enter THE BAR

Thanks, Bob, I think perhaps it's
something to do with the formatting
█
```

COMPUNET

As most of you will know, Compunet is a On-Line Database/Information service for Commodore 64 and 128 owners. To join Compunet you must buy a Compunet Modem, you will then be allocated a password and you are away.

Recently Compunet has become a breeding area for talented Commodore Users, and people such as Bob Stevenson and Douglas Hare are becoming highly successful in the Commodore market, for their brilliant graphics and animations. To find out more about Compunet, I spoke with Jane Firbank, its 'Editor'.

"I think that one very important feature is the network feature, areas such as Partyline and Chatline allow for a lot of free expression, as do the graphics and sound uploads.... This adds up to more than just a database is a unique selling point"

How do you feel about the sucess and fame of people like Bob Stevenson and Hugh Riley?;

Communications... the bridge to a new, exciting world...

"Absolutely delighted!, it makes us feel like distributors, we feel we give people the chance to show their talent and true potential"

Where do you see Compunet going in the future?;

"We are very exploratory, we like to see how people are using the system, and then develop it... Take MUD, it has gone so well that we are currently working on a new Multi User Game...we'll announce details shortly. MUD also showed us that people were playing just to talk, so we started Partyline."

How many subscribers do you have?;

"Currently between five and six thousand, and this would be a great deal higher but for the unduly technical image associated with on-line databases.... People have to realise that our great strength is participation...It's not just for technology buffs...It's fun for everyone who takes part.

In the light of the recent court case, has hacking been a problem at Compunet?;

"Thankfully our system has an extra level of security - you have to use a certain modem in conjunction with your password, and this makes hacking very difficult."

STOP PRESS.....

At the recent Commodore show, Compunet attracted a great deal of interest, and were selling a collection of tunes by Bogg at an amazing rate. Finally I would just like to thank Jane for her time and effort.

BUZZ BUZZ BUZZ

BULLETIN BOARD

Having first bought a modem, most people will spend about a month using it purely to log on to commercial databases such as Prestel, or sending Electronic Mail through a subscriber system such as Telecom Gold. Soon, however, they will learn that there are literally thousands of other modem users around, and when they meet, it isn't on Micronet or Gold, it's on a Bulletin Board.

WHAT IS A BULLETIN BOARD?

A Bulletin Board is generally one person's attempt to provide a service to other people with similar interests. It is usually run using one person's home telephone line. When another computer user telephones this number, the host computer answers and sends a series of tones. These are then interpreted by software and displayed as text on the screen.

Bulletin boards are different to main systems such as Prestel in many ways. Firstly there are very few that allow more than one person to access the system, and secondly they are a great deal smaller.

The U.S. was the first country to have Bulletin Boards when, during the late '70s groups of hackers all over America needed a meeting place, so one wrote some basic BBS (Bulletin Board Software) so that they could leave notes, messages and tips on one central computer which they would all log onto regularly.

Originally, most Bulletin Boards were set up on Tandy or Apple machines, which were very popular. Now however, BBS is available for a wide range of micros, from BBCs to PCs.

Recently the UK has become the centre of Bulletin Boards, with more than 200 currently up and running. Most of these boards specialise in different computers, with free programs to download, and areas where you can leave questions or problems, these will then be viewed by everyone who logs onto the board.

As well as downloads, BB's also have extensive mailing systems, both private person to person, and general messages to everyone who logs on.

What has made BBS so popular is the ease in which anyone can set one up. Using a small computer such as a Commodore 64 and a disk drive, you could set up a Board in no time at all. Many people have set up boards which they direct towards their personal interests. To this ends there are boards specifically for a wide variety of hobbies; Radio HAMs, Programmers, Journalists, and many more.

The larger boards, many of which have about 2,500 regular users, have sub-sections, run by people who are knowledgeable on a specific subject. These are known as SIGs, or Special Interest Groups, and mostly they are dedicated to different computer using groups.

In London there are over forty different boards, the most popular of which is probably the 'London Underground'. The Underground's Sysop (System Operator) is Brian Robinson, who started up the board a while ago on a BBC. Recent developments – mainly the never ending phone calls – meant that Brian had to upgrade his system, and it's now running on a IBM PC Clone with a 20Mbyte hard disk.

To describe it accurately, the London Underground is a FIDO board, as that's the software it uses, but it can be accessed by anyone, 24 hours a day. It has SIGs for Commodore/Amiga, Amstrad, and a special section for people with modem troubles. It can be accessed on 1200/75 or 300/300 baud on 01-863 0198.

Once you have logged on, the system takes your name and where you are calling from, it then lets you decide on a password of your choice. These details are then recorded on the user log, and recalled whenever you log back on.

Bulletin Boards are great fun, they allow you to meet a wide variety of people who have one thing in common, they are all interested in computing in one form or another. If you have a modem, then get into the BB scene, you'll never realise how much you've been missing!

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Age__________ Micro__________

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ZZ
BUZZ
BUZZ
BUZZ

US BOARDS

It all started in the US. Computer communications have been a major part of Computing in America for a long time. At the moment there are four really large boards, all multi-user, that are very popular with business and home users alike.

Byte is still one of the largest computer magazines in the world, and in many ways it isn't suprising therefore that their information service is very popular. Called BIX, it has information on a whole variety of computers, and has recently become very interested in the Amiga, dedicating a very large section to it. People from all over the world log on to BIX, and the messages certainly reflect this.

Although it isn't very user friendly, it is the kind of system that, once learnt, is never forgotten!

Of the other services, Commodore run one called Quantum Link, which is rather like a US Compunet - only quite a lot larger. Compuserve and The Source are both massive databases that reflect how seriously information services are taken. As well as these there are quite literally thousands of Bulletin Boards varying from small 'Hackers havens', to massive boards like the New York Underground!

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Gemini & CentreSoft *PRESENT*

OFFICE MATE

With over four years experience of providing practical software solutions for business and home applications, Gemini have put together a selected range of famous titles for the Commodore 64 and 128 in TWO special packs, at VERY SPECIAL prices. These super value packs contain all the serious application software you're ever likely to need for your CBM, from word processing and database management to a complete professional business accounting system. Gemini's 'OFFICE MATE' and 'OFFICE MASTER' are here now - put that computer to work!

OFFICE MASTER

Office Mate

Word Processor

A fully-featured word processor program with text formatting - right justification - adjustable page length - text centering - output of all or part of text to printer - selective saving - file concatenation - block move - block delete - reverse print - graphics print - double width print - sorting - left and right margin selectable - word count - search and replace.

Mailing List

This program will enable you to keep a record of names and addresses and then print, examine, sort and find them, all with special selection techniques. Featuring the famous Gemini 'search-key' system, you have the option of creating your own dedicated coding routines for each name on the file.
For example, on most mail systems you are only given the standard headings such as name, street, town, county, etc. but with our system, you could for example find all companies listed that have a turnover in excess of a certain figure, or all subscribers who are behind with their subscriptions, or all people eligible for a Christmas card this year! A full range of utilities is callable from the menu including, ofcourse, label printing.

Database

Superior file management system with features found only with packages costing much, much more. Completely user-definable data entry format - colours definable - advanced mathematics using built-in machine code expression evaluator - fast sort on numeric and string fields - extensive searching with 'wild card' capability - user-definable data summaries - simple on-screen editing. A really POWERFUL database!

Home Accounts

Designed as a complete home accounting package, this program allows the user to set up and maintain a budget for items of household expenditure and compare actual with budget ,either numerically, or with the aid of chart graphics. A complete bank account routine is included, together with standard expenditure categories which may be changed to suit.

- ***Word Processor***
- ***Database***
- ***Mailing List***
- ***Home Accounts***
- ***Extensive Documentation***

OFFICE MATE £12 Cassette
or 1541 Disk **£15**

Step up to OFFICE MATE and save money! Usual price individually £79.80

- ***Database***
- ***Mailist***
- ***Word Processor***
- ***Stock Control***
- ***Cash Book***
- ***Final Accounts***
- ***VAT File***
- ***Full Documentation***

Database, Mailist and Word Processor as 'Office Mate' PLUS:
Cash Book / Final Accounts / VAT File.
Gemini's legendary cash book system for the CBM is a complete 'stand-alone' accounting software package, already in extensive use by both accountants and their clients.

Office Master

General System Overview

The Gemini cash book package for the Commodore 64/128 microcomputer is designed for a hardware system consisting of:

1. Commodore 64/128 microcomputer.
2. 80 column printer.
3. Cassette or disk data storage.

Please note that running the program on disk will not change the way that the program works, but you will have the benefit of far greater speed and reliability for the loading and saving of files that a disk system provides.

There is a total of 199 nominal accounts, a large number of which may be defined by the user. You may have up to four cash control accounts, six bank control accounts, one sales ledger and one purchase ledger control account.

The program will store a data file consisting of:

1. The account titles.
2. The current cumulative balance on each account (debit or credit).
3. The net movement on each account for every month of the year.
4. VAT net sales and net payments figures, which are automatically created and maintained by the program.

This same data file is used by the FINAL ACCOUNTS program. The 'VAT FILE' which accompanies this package is designed primarily for those users on the Retailers special VAT schemes.

The main features of the CASH BOOK program are as follows:

1. Double entry routines for transactions through the cash/bank accounts and sales/purchase ledger control accounts.
2. Journal facility for the initial set up of accounts, or for adjustments to any of the accounts.
3. The facility to produce the following screened or printed reports:
   (a) Listing of all the nominal account titles.
   (b) Monthly transaction summaries.
   (c) A trial balance whenever required.
   (d) Screen VAT memo account balances (sales/net purchases, and VAT accounts).
   (e) A batch printing facility which provides details of all the transactions entered in the current run of the program.
4. The facility to extract regular management information such as cash/bank balances, debtors and creditors, sales, overheads, etc.
5. The program interfaces with the Gemini FINAL - ACCOUNTS program to enable Trading and Profit and Loss accounts and Balance Sheet to be produced whenever required. Comparative or budget figures can be shown alongside the actual figures using this program.
6. Screen prompts throughout the program to facilitate ease of use.
7. Storage of VAT information to assist in the preparation of periodic VAT returns.
8. Error trapping routines to minimise input errors.
9. The facility to handle the financial transactions of sole traders, partnerships, limited companies, clubs, etc.

Users registered for VAT are reminded that it is a statutory requirement to inform their local VAT office when they change their accounting records on to a new computerised accounting system.

OFFICE MASTER
£25
Cassette
or 1541 Disk

Dealers please note that 'Office Mate' and 'Office Master' now available also on BBC, Electron, and Spectrum.

MAIL ORDER TO:

Gemini
Gemini Marketing Limited, 'Gemini House',
Dinan Way Trading Estate, Exmouth, EX8 4RS.

Please send me ______ CBM 64/128 'Office Mate' packs @ £12 (Disk £15)

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Cassette / Disk (please delete as necessary)

Cheque / P.O.s enclosed to value £ ______
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Access/Amex No. ______

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FANTASTIC!

CCI tells you what really went on at the 7th Commodore Show.

Never before can anyone remember the gates being closed on an eager queue at a Commodore Show ... but that is what happened at the Novotel in Hammersmith on Saturday May 10th 1986 ... And it was Cup Final day too! Queues were forming on the stairs and stands were drowning in people. Database, the Show organisers, were forced, temporarily, to lock out hundreds of impatient Commodore owners because the jam of the thousands pouring in was beginning to look likely to become dangerous.

At CCI's large stand there were always huge crowds, especially hypnotised by Bulletin 1000, the video magazine, but also clamouring for T-shirts, machine covers and copies of CCI. The numbers were so great around the 'Amiga Village' stand that the floor threatened to collapse!

When CCI asked the boss of one stand, selling high price peripherals, what he thought of the show, he gazed around stunned at his virtually empty shelves, and told us in one word:''Fantastic''.

Any doubts about the health of the Commodore market were certainly blown away after this show. However, in spite of the ballyhoo, in the main, the AMIGA did not play a large role. It was the 64/128 and the C16/Plus/4 owners who were hunting what interested them for their own machines that created the real impact. Commodore must have regretted its decision not to take a stand for the 128 itself. They could certainly have achieved a great deal by giving the potential upgraders from other Commodore machines a chance to get close to the 128, which has not taken off yet as a really mass seller. We heard, however that Commodore will shortly be making a big poster push for the 128D - the business style version.

Music, a fast growing area of Commodore computing was one of the show's big successes, powered by the presence of Rick Wakeman of the rock group ''YES'' fame in the specially built Show Theatre. People lugging the colourful Music Expansion package were all over. Supersoft's new drum package, Rhythm King certainly drew the crowds, too. Rick Wakeman was interviewed live on line by Sid Smith, the editor of Micronet, from CCI's stand at the end of the show. Micronet's own stand, managed by the lovely Lynn Bennett - tipped for 'Miss Gorgeous Eyes 1986' - also attracted great interest. It was sensibly placed at the 'Communication Alley' with other networks like Compunet and Microlink. There, too, were Modem House, who sell, we were told, more Modems than all the other modem houses in the UK put together. In the 'Alley' you could send flowers or book tickets by British Rail - by computer communications, of course.

Outside the UK

There were exhibitors from other countries making an impact. Timeworks from the US has an about-to-be-launched 128 range, including ''Sideways'', a utility that prints spreadsheets - you guessed it - sideways. Sharing a stand with the highly regarded books of CCI's own technical expert Raeto West of Level Ltd, was Israeli-based, Chilean-born, sometime Olympic skier - Juan Holz, who created 'The Very First' the 128 tutorial package for Commodore and has now developed a clever adaptor for an 80 column format for monitors. From Canada, there was Compec which received great interest in its 2K Ram expansion for the AMIGA. A stand which drew many frustrated visitors was CAS from France. They were showing the new Power Cartridge and a very good-looking printer at just £75. Unfortunately due to transport difficulties, like their van breaking down at Dover, they could show their products but not supply the eager buyers!

The 'Bigglest' Game

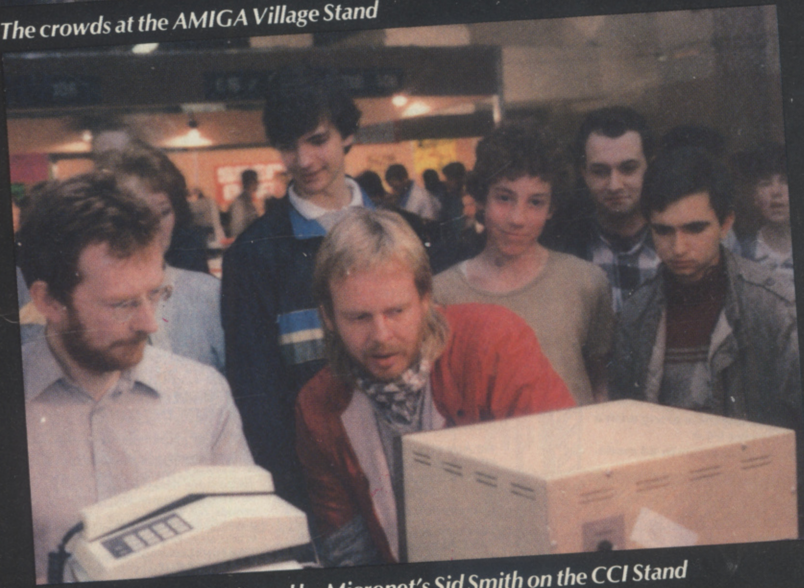
As someone put it , Mirrorsoft had the 'Bigglest' game release of the show. Their 'Biggles' is obviously going to be a chart winner through the summer - it has an impressive 2 minute promo on the most recent Bulletin 1000 video. Ariolasoft's Frank Brunger and Amanda Barry were at the show but not on their stand, which is surprising, in view of how good their new release ''Golf Construction'' is. Interestingly, they told CCI that this excellent game - at CCI we are keen and frequent players - was confusing some people by the ''Construction Set'' bit of the title, which makes some bright ones think it isn't a game at all. At the show, too, was Donat Kiss of Andromeda, the Hungarian company who wrote the program, whom we expect to see at the Commodore Show in Budapest (we'll bring you a report of that show in AUGUST'S CCI). The oddly named S.E.C.S. had two game successes with ''Opera House'' and ''The Family Game''.

Many games, even the most recent releases were on sale at large discounts. Martech had their 'Strip Poker' game selling in high numbers. Vanguard had floods of customers for their 3-D Hi-Res Ciphod's. There were a lot of games just a few months or years - out of date being sold off cheap. The ANCO stand, specialising in C16/Plus/4, was beseiged by enormous crowds thoughout the show and on the Palan stand, you could pick up joysticks at £4.99 and software from 50p. Apart from CCI's new book offer - there were quite a few publications for the Commodore public. 1st Publishing had the early copies of their AMIGA book and others especially for the 128. Duckworth had many, including the new 'Using the C16' by the prolific Peter Gerrard (reviewed in the next issue of CCI) and James Pitman told us that his company were selling the very last few of their popular Plus/4 book - a recent offer in CCI.

'AMIGA VILLAGE'

The Amiga Village was a large stand set aside for companies to demonstrate the software packages either already on sale or under development for the new heralded Commodore machine that received its official launch at champagne breakfast the first day of the show. It was also the place where there were regular demonstrations of the extraordinary capabilities of this 68000 chip machine. It has to be said that the 'Amiga Village' concept was not, in our view, a great success. It was not the machine that failed to impress - everyone who had not seen before its multi-tasking and other advantages was truly amazed at its power and potential. It was the smallness of numbers and the lack of finished packages available that depressed. The developers themselves are no doubt beavering away and will in their own good time bring their products to market but this was an ideal showcase for Commodore itself to bring its own public the opportunity for 'hands on' experience - the best way to impress with such an impressive machine. CCI heard that Commodore intend to do something spectalar with the AMIGA at the PC User show. Perhaps the failure to make a real impact at this Commodore Show can be put down to the very small and extremely hard pressed staff that Commodore now has. Their UK boss, General Manager Chris Kaday, was even seen with

The crowds at the AMIGA Village Stand



Rick Wakeman interviewed by Micronet's Sid Smith on the CCI Stand

The Happy Winner of CCI's 128 Draw

walkie-talkie acting as usherette in the crowded Show Theatre before a presentation of Commodore's ''The Story So Far''. His shouts of 'Three more over here!' were not requests for more AMIGAs, but for extra bottoms to fill seats!

For the dedicated users, ICPUG (now to have a column in CCI) had their well-attended question and answer sessions. Anyone seriously interested in what their Commodore can do always learns something from these real experts.

Superscript Will Do Nicely, Thank You

The business side of Commodore, too, was shown to be still flourishing. At the economic end, Gemini had their very popular Office Mate and Office Master. Microshare showed their interesting 64 multi-user system. And for me the little star of the show, unannounced with only a few late demonstrations, was Superscript. Superscript isn't new? Ah, but this was a version on the Astron card (see our CES report on this issue). We heard from a Micropro director that in Japan they are anxious to order hundreds of thousands of the Astron Card 64 version of Superscript.

The Superscript Astron card at the show was the very last of 30 they had used in the development and was rushed to the Show the last day. It will probably go on sale in the Autumn at around £99 including the adaptor that plugs into the 64.

Taking the prize for the most unusual name at the Show was 'The Things', a very useful copy holder that attaches to your monitor to let you have eye level vision and your hands free.

Give Her Back!

Everybody who visited the 7th Commodore Show seemed to have a really enjoyable time and will doubtless return to the next one. CCI is talking to Database, the organisers, about putting together a show in the Autumn. If you didn't get to this Show yourself, you can read the Show Guide entries which we are reproducing in the following pages. By the way, demand was so great at the Show that CCI ran out of the snazzy new covers we are providing for 128's and other Commodore machines. We apologise to the many disappointed customers, but we now have a renewed supply and you can order the covers from the form in this issue of CCI. And who was the bright guy who took off at the end with Kerry - our tall, beautiful, blonde Swedish assistant, who was handing out the Show Guides CCI created and donated free to all visitors? Please bring her back! We need her for the next Show - when we hope to see you too!

See you there
at the next
show!

– the crowd attracts attention

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Quickdisc+

FAST LOAD PLUS UTILITY CARTRIDGE

After enjoying considerable success since its release we have now made some improvements to "QUICKDISC+" to maintain its position as the best value in the disc "speed up/utility" cartridges.

Fast LOAD (now 5-7 times normal speed). Works with majority of protected software. Can be switched in and out from the keyboard.

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Fast Format takes just 20 seconds.

Fast Backup copies an entire disc in four minutes (not protected software).

Very Fast File Copier for selective file copying at HIGH speed. Now handles files up to **248 blocks** long.

Improved DOS commands (DOS 5.1) makes for easy use of the disc drive. eg. $(RETURN) will LOAD and display a directory without overwriting BASIC. SHIFT RUN/STOP will LOAD "0:*",8,1 etc. **Very, very useful.**

Incorporates Centronics printer software (user port) **with CBM graphics** capability (requires user port centronics cable).

A RESET switch is fitted. (We have found this to be "unstoppable", it even preserves the tape buffer).

NO MEMORY IS USED by this cartridge, it is totally "transparent" and uses special switching techniques.

"128" and 1570 compatible in '64 mode.

PLUS MANY MORE USEFUL FEATURES TO MAKE YOUR 1541 FAR MORE FRIENDLY TO OPERATE.

ONLY £19.95

When reviewing "Quickdisc+" Commodore Horizons said: **"A MUST FOR EVERY 1541 OWNER".**

NOW EVEN FASTER

DISC DISECTOR V4.0

Disc-Disector

Now the **fourth generation** of the country's **leading** disc back-up/utility package is available. Various improvements have been incorporated to re-establish "Disc Disector" as the **ultimate weapon.** Of particular importance are the following.

"EVESHAM 3 MINUTE NIBBLER" is the **latest version** of the infamous "Evesham Nibbler" now boasting **even more power and speed. Will now copy even the most highly protected discs in 3-4 minutes.** Handles the latest types of disc protection **completely automatically.** At the time of going to press this program copied **virtually every disc program available for testing including the latest in games and business software.** (It even copies '128 format or discs in CPM mode on the '128).

"DUAL DRIVE NIBBLER" allows the use of two drives to make **even faster back-ups.** Incorporates device number change software so no hardware mods necessary.

"NOVA TRANSFER" will **transfer to disc** the latest Nova Load programs including **multi part loaders.** A very useful utility that also includes routines to transfer "Summer Games II" and "Beach-Head II" to disc.

"DISCO" will transfer standard speed load software to disc.

"TRANS QD" allows you to save a fast load system to your own discs.

"DOUBLE BACK UP" is a **very fast** two drive back up.

As well as these important newcomers all the old favourite utilities which have helped earn "Disector" such a large following are included. These include **Menu Maker (selective), Fast Format, Unscratch, Disc Monitor, Disc Orderly, Fast File Copy, Index, etc. etc.**

The whole package is menu driven and has its own fast boot system built in for your convenience. Pays for itself the first day your receive it.

ONLY £29.95

Customers with earlier versions may return them along with a payment of £9.95 to receive V4.0

All programs are CBM 128 and 1570/71 compatible in '64 mode.

FREEZE FRAME

THE NEW GENERATION OF BACKUP METHODS IS NOW EVEN BETTER

THE LAST WORD IN BACKUP TECHNOLOGY

"Freeze Frame" has enjoyed **incredible success** for the past few months. Sales both in the U.K. and abroad have been very good and **thousands of satisfied customers** are using them. **Continual development** has enabled us to launch an **improved version** of the product that incorporates a few useful improvements **PLUS** it is **even more powerful.** At the time of going to press our **thorough testing could not find one single, memory resident, program that "Freeze Frame" could not handle.** (This includes **ALL** the latest software up to 4th May 1986).

OPERATING "FREEZE FRAME"

"Freeze frame" is simplicity itself to use. It is cartridge based so is simply plugged into the cartridge port. When the computer is switched on a message is displayed, pressing "RETURN" will clear the computer back to the normal start up screen. Software can now be loaded from tape or disc **completely as normal.** The latest version of "Freeze Frame" will, to the best of our knowledge, allow **ANY software** to load and run normally (unlike competitive products).

"Freeze Frame" can be brought into operation at any convenient point by pressing the button on it. You can then do one of three things:—

1. **Pressing "D" will save a working version of the program in memory to a formatted disc. This version will include a high speed reload.**
2. **Pressing "S" will do the same as "D" except that the reload will be at standard 1541 load speed. (Also suitable for U.S. spec. machines, 4040 drives, some fast load systems etc.)**
3. **Pressing "T" will save a working version of the program in memory to tape. This incorporates a high speed reload at approx. 2400 baud.**

THAT IS IT!!

ALL PROGRAMS SAVED WITH "FREEZE FRAME" CAN BE RELOADED INDEPENDANTLY OF THE UTILITY

WE ARE CONFIDENT THAT FREEZE FRAME IS THE MOST POWERFUL AND FLEXIBLE BACKUP SYSTEM IN THE WORLD.

Does any other utility offer all this?

TAPE TO DISC **DISC TO TAPE**
DISC TO DISC **DISC TO TAPE**

PLUS the added flexibility of being able to save at any stage and return to that position, because programs restart from the point where the button is pressed.

An awe inspiring success rate.

Customise programs by putting in POKEs for endless lives etc. and then save with those active.

Reload independant of the cartridge.

Available now.

"FREEZE FRAME" HAS NO SERIOUS COMPETITION.

COMPETITIVE PRODUCTS

A successful product always spawns imitators and "Freeze Frame" is certainly no exception. Fortunately for us, but perhaps not for the people who have purchased them, their main similarity seems to be in advertising style.

"The Final Cartridge" is a good product in many ways, **BUT** when it comes to making backups it is just not in the same class as "Freeze Frame". Another major drawback, not made clear by advertising is that saved programs can **ONLY be reloaded with the cartridge in situ.**

"UPC1" has its uses but in its current form **cannot be taken seriously** as competition for "Freeze Frame".

"ACTION REPLAY" has no tape save, puts 8 files on a disc save and contrary to their claims we have found many programs that it can't handle.

ONLY £39.95

Owners of earlier versions can return them and upgrade for £14.95

SERIOUS WARNING: THIS IS AN EXTREMELY POWERFUL PRODUCT AND IS STRICTLY FOR PERSONAL USE. DON'T COMPARE IT WITH ANY OTHER PRODUCT, NOTHING ELSE OFFERS THE POWER OF "FREEZE FRAME".

DOUBLER

The tape back up "device"

Doubler has been an **enormous success** and continues to sell very well. Why? Because it is the **best product of its type** on the market. Doubler uses a unique method that copies **all types of software** regardless of speed. It consists of **hardware and software**. The software is the key part as unlike other products of its type Doubler creates a **brand new machine copy**. It is very easy to use and very successful. In fact our tests **have proved** that this "device" can achieve **100% success**.

Requires access to two data recorders.

ONLY £12.95

Why settle for less—this is the best.

QUIET DRIVE STOPS

This package incorporates new drive stops for **two 1541s** that will **end for good** the dreaded "woodpecker". The fitting process is very easy and a test program is provided to check the fitment. Helps prevent future alignment problems and makes your drive purr with satisfaction.

ONLY £4.95

ODDS AND ENDS

STAR NL10C The best Commodore ready printer, many features including 120cps draft mode, 27cps near letter quality, tractor and friction feed with semi automatic single sheet feed, most functions front panel switch selectable but perhaps most importantly the **interface cartridge is replaceable.** So if you change to another make of computer you simply purchase a new interface to suit. **ONLY £269.00**

DISC NOTCHER Allows you to easily cut a second write protect notch in your discs so that you can use both sides. A very useful gadget. **ONLY £6.95**

AZIMATE 3000 Lets you realign the head of your data cassette quickly and easily. Supplied with suitable screwdriver. **ONLY £6.95**

3M DISKETTES The best quality discs, available from us at the price of cheap ones. Buy the best, they last a lifetime. Boxes of ten—

SINGLE SIDE/DOUBLE DENSITY	**£11.95**
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COMMODORE COMPATIBLE DATA RECORDER Performs the same operations as the C2N or 1531 but a useful saving. Also includes a pause button (if for use with C16/PLUS4 please state) **ONLY £29.95**

AND THEN THERE WAS

DOLPHIN DOS

THE DIFFERENCE IS *STAGGERING*

Like everyone that has had the pleasure of seeing this system in operation you will be amazed by both the speed and ease of use. It is compatible with the majority of commercial software, speeding up both the program loading and SEQ/REL files. Fitting requires the insertion of two sub assembly boards, one in the 1541 and one in the '64/'128. This does not normally entail soldering, although a small amount will be necessary with some machines.

ONLY £69.95

If you require further information please send SAE for fact sheet.

Operates with the CBM 64 or 128 in '64 mode with 1541 disc drive.

THE FEATURES

25x FASTER LOADING (PROGRAM FILES)
12x FASTER SAVING (PROGRAM FILES)
10x FASTER LOADING (SEQUENTIAL FILES)
8x FASTER SAVING (SEQUENTIAL FILES)
3x FASTER LOAD AND SAVE (RELATIVE)
(These figures do not allow for searching)
Easy DOS commands from function keys.
Fast formats 40 tracks giving 749 blocks free.
Centronics driver software inbuilt.
Machine code monitor.
Can be switched out if necessary.

SUBJECT TO AVAILABILITY. ALL ORDERS DESPATCHED THE WORKING DAY AFTER RECEIPT

All prices include P&P and VAT. Send cheque, Postal Order or Credit Card No. Credit Card orders accepted by phone. Callers welcome. Wide range of goods stocked. Trade enquiries welcome. European orders send price as advertised. Outside Europe £2.00 for airmail. Mail order to Evesham please.

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Tel: 021-458 4564

In Australia contact: **MICRO ACCESSORIES of S.A.**, 39b Anderson Walk, Smithfield, South Australia 5114. Tel: (08) 254 6284 commodore

Supersoft

1 It's appropriate that SUPERSOFT are on Stand No. 1 this year because having started producing Commodore software as long ago as 1978 they are probably the oldest company at the show. SUPERSOFT have an extensive range of software for the Commodore 64 and the PET/CBM range, including 2001, 3000, 4000 and 8000 series machines. On demo for the first time will be RHYTHM KING, a software and cartridge combination that allows the Commodore 64 to generate real drum sounds, and MICROVOX PRO, the advanced version of the MICROVOX digital sampler previewed at last year's show. SUPERSOFT are looking for overseas distributors, particularly in West Germany, Holland and Scandinavia.

Winchester House, Canning Road, Harrow, Middx. HA3 7SJ. Tel: 01-861 1160.

Ariolasoft

A4-A5 We will be demonstrating the complete range of AMIGA programs licensed to Ariolasoft from Electronic Arts, the leading company in Amiga software development in the U.S.A. Titles shown will be the superb productivity programs, DeluxePaint, DeluxePrint, and DeluxeVideo, plus a whole range of titles converted for the Amiga: SKYFOX, ARCTICFOX, ONE ON ONE, ARCHON, and THE SEVEN CITIES OF GOLD. Latest releases for the Commodore 64/128 will also be shown, including THE GOLF CONSTRUCTION SET and ARCHON II, plus forthcoming titles out this summer. Please come along to stand A4/A5 and try them out for yourself.

68 Long Acre, Covent Garden, London, WC2E 9JH.

Enigma Developments

A6 "Trivia Trove" For the Amiga consists of various components combining speed and co-ordination with mental strategies. Screen 1 requires you to pitch your wits against the computer in a variation of the tic-tac-toe theme. There are three further stages which are harder to complete. Players that win through successive levels can claim vouchers off further Enigma Software. But of course the ever elusive high-score is available to all. "Trivia Trove" is a game for the whole family. The package includes two disks. The program disk and a data disk holding approx. 3000 questions on various subjects. Further Data Disks will be available soon.

66 London Road, Leicester LE2 0QD.
Tel: 0533 550993

Sophus

A11 "KIM": A versatile personal information system that uses Amiga's advanced features. When the telephone rings with an awkward query, flip the window to the front and find the details with a few mouse clicks. Another click copies it to ramdisk for splicing into word processors. Many powerful facilities. £49.000*.

"ROMBO": Searching the heavy Amiga technical manuals can strain your wrist! ROMBO is KIM loaded with all the system calls in C, Assembler, TDI Modula-2. More languages to follow. Add your own. £60.00*.

*Special Offer including VAT.

Unit 2c, Newlands, Inglemire Lane, Hull, North Humberside HU6 7TQ. Tel: 0482 802142.

Vanguard Leisure Ltd.

13 Vanguard Leisure will be launching the Disk version of their very successful game Ciphoid 9. The cassette was pick of the week in C.T.W. and the disk has even more to offer with superb screen shots of the Earth's major cities under attack, also a new Microswitched Joystick will be on sale and a large selection of software at special show prices.

Church Row Chambers, Franklands, Longton, Preston PR4 5PN. Tel: 0772 617665.

Sunshine Books

A21 Sunshine will be exhibiting their most recent book on the Amiga, together with the best selling — weekly Popular Computing Weekly.

12/13 Little Newport Street, London WC2A 7PP. Tel: 01-437 4343. Telex: 296275.

Raeto West & Juan Holz

27 Raeto West is well known for this computer writing including his manual on the Commodore 64, "Programming the Commodore 64" (published by Level Ltd.). Juam Holz of Horasoft has written many training programme for Commodore computers. Both men will be present in person.

PO Box 438, Hampstead, London NW3 1BA. Tel: 01-794 7241.

Overbase Ltd

28 New product recently launched in the U.K. — Thingi

A Hi-Tec Document Holder which complements any computer, makes full use of the last available space around your V.D.U. monitor etc.

Attaches using Velcro fastning, easy detached and replaced.

Usual retail price £6.99. Special show price £4.99. Trade enquiries, U.K. and foreign welcomed.

Overbase Ltd. 176a Conway Street, Birkenhead, Wirral, Merseyside. L41 JJB. Tel: 051-647 8981.

Micro Apl

A29 To complement the power and efficiency of the Commodore Amiga you can now buy APL.68000, the fourth generation language newly implemented on this machine by MicroAPL, the U.K.'s leading APL systems house.

For only £375 you can enjoy power and accuracy superior to IBM's mainframe APL. The unique development environment of APL.68000 will enable you to write sophisticated programmes within days.

All the features of the Amiga are fully supported by APL.68000 making this machine a serious development tool for the home and business user. To join a growing band of real programmers come to stand A29 in the Amiga village and place your order today.

Micro APL, Unit 1F, Tideway Industrial Estate, 87 Kirtling St., London. SW8 5BP. Tel: 01-622 0395. Tlx: 896885 IOTA.

Interlex

A30 Interlex is a microcomputer systems house and are dealers for most micros and software including the amazing Amiga.

We offer technical support for systems and applications software and operate a hotline from 9.00 am to 9.00 pm Monday to Friday and 9.00 am to 1.00 pm on Saturday. The service is included with all machines/software purchased from us or is available separately at £35 for three months unlimited support. We also provided consultancy and programming services on Amiga and other micros. We also have our own products for the Amiga. These are a simple word processor for £50 and an Estate Agency system for £95. A front end to the Amiga system is also available at £95. In the pipeline are packages for electronic mail, database and spreadsheet. Interlex is committed to the Amiga — we feel that the best micro on the market deserves the best attention.

Imperial House, Lower Teddington Road, Kingston-upon-Thames, Surrey, KT1 4EP. Tel: 01-943 4366.

Trojan

31 Trojan products are here to show their Cad-Master graphics package. A top quality light pen plus superb graphics software.

The Cad-Master range of graphics packs are designed and manufactured by Trojan at their Swansea base.

Every pen is tested and has Trojan's phone number printed on its barrel.

The Cad-Master will be demonstrated throughout the duration of the show and you discuss the product with our staff. During the show the Cad-Master for the CBM64/128 will be offered at a substantial reduction from its normal price.

166 Derlwyn, Dunvant, Swansea SA2 7PF. Tel: 0792 205491.

Mirrorsoft

32 Do you want to be a hero? If you do, come to the Mirrorsoft stand and see the brand-new Biggles game, licensed from the film of the same name which hits the big screens from May 23rd. Neil Dickson, who plays Biggles in the film, will be on the stand on Saturday from 11am to 1pm, and we'll have posters, t-shirts, authentic 'Biggles' pilot's scarves, button badges, stickers there too. So if you want to be a hero, don't miss us! (PS — come and see the rest of our Commodore product, too).

Mirrorsoft, Maxwell House, 74 Worship St., London EC2A 2EN. Tel: 01-377 4837. Tlx: 885233.

Wigmore House Ltd.

33 The Wigmore MS2000 mouse will be on display for the first time. Since being launched it has notched up big sales and received rave reviews, e.g. "Hardware excellent, software technically stunning" — P.C.W. "The best . . makes other designs look sad," C.Hor. "Best graphics package I have come across,"C.Int. We will be launching an even more advanced software program caled "The Artist". A good mouse peripheral offers a new freedom and dimension to computing.

32 Savile Row, London W1X 1AG. Tel: 01-734 8826.

British Rail

36 ELECTRIC EXPRESS — the latest travel news and information from British Rail is on line! If you can't decided where to go or what to do, read Leisure Express, BR's travellers' newspaper, on British Telecom's Microlink. Anyone with a personal computer can call up pages about British Rail's extensive services, holiday trips and special offers. Switch to Electric Express and you can tune in to the latest and best from British Rail's Leisure Express.

22, Vineyard Road, Wellington, Shropshire. Tel: 0952 51100.

Compunet

40 Compunet is the innovative database for Commodore 64 and 128 owners. Its members from the largest user group of Commodore home micros. Keyword routings, telex and a new multi-user games are being demonstrated as is Party-Line, Cnet's advanced chat and conferencing facility. Also on display are Club 126, the section for business users, and Zap Club, for games fans. All Compunet members have the facility to upload their own text and programs onto the system, and the top-quality graphics, music, animations and games demos produced by will also be on view, many runing on-line.

7-11 Minerva Road, London. NW10 6HJ.
Tel: 01-985 8866.

Gemini Marketing Ltd.

47 With over four years of providing practical software solutions for businesses and the home, Gemini are pleased to announce two SPECIAL budget packs for the CBM64 and CBM128 at VERY SPECIAL PRICES:—

'OFFICE MATE' : Cass £12 (SAVING £68, if purchased separately!)
: Disk £15 (SAVING £85, if purchased separately!)

Contains:—
Database, Word Processor, Mailist, Home Accounts

'OFFICE MASTER' : Cass £25 (SAVING £195, if purchased separately!)
: Disk £25 (SAVING £230, if purchased separately!)

Contains:—
Database, Word Processor, Mailist, Home Accounts, Stock Control, VAT File, Cashbook Accounting, Final Accounts.

These compilations have been selected from our highly successful Commodore range.

Unit 21, Dinan Way Trading Estate, Exmouth EX8 4RS, England. Tel: (0395) 265165. Telex: 42956 Gemini.

3D Digital Design & Development Ltd.

48 3D Digital Design & Development Ltd., will exhibit a range of their Industrial and Scientific Interfaces, for data logging, monitory and control applications. These interfaces may be connected to any of the COMMODORE range of microcomputers including the AMIGA. On show will be a range of the HIGHWAY Interface units, these include the ANALOG HIGHWAY and DIGITAL HIGHWAY. The HIGHWAY range is suitable for local, remote and distributed application.

18-19 Warren Street, London
W1P 5DB. Tel: 01-387 7388. Telex: 8953742.

Timeworks (U.K.) Ltd.

49 Timeworks, America's leading publisher of Commodore software, publishes a broad line of productivity, educational, and business management programs for the C64 and C128 computers.

The U.K. editions of Timeworks' best selling productivity programs for the C128 will be available in England this summer. WORD WRITER 128, with an 85,000 word spelling checker, SWIFTCALC 128 with Super Graphics and Sideways, and DATA MANAGER 128 with Report Writer, interface with each other for a complete productivity system.

Full Customer Technical Service will be available in England — at no charge — from Timeworks (U.K.) Ltd.

5-7 Forlease Road, Maidenhead, Berkshire SL6 1RP. Rel: 0628 75573. Telex: 849462 TELFAC G.

Viza Software Ltd.

66 This year, Viza Software have a prominent and colourful stand immediately inside the Champagne Suite. This is the fourth successful year for Viza with an increasing range of business software packages for both small and large Commodore machines. Last year saw the launch of Vizawrite for the Commodore PC, this year sees the launch of Vizastar, the first professional integrated spreadsheet, database and graphics package for the 128. Viza expect this product to follow in the success of their word processing package Vizawrite Classic, released for the 128 earlier in the year. U.S. magazine reviews continue to make favourable comparisons between Vizastar and Lotus 1-2-3, however Vizastar has a full scale database system as an integral part of the product. Vizawrite Classic for the 128 retails at £99.95. Vizastar for the 128 retails at £129.95. The entire Viza product range will be on view at the show, plus Viza will be previewing their new word processing system for the exciting new Amiga.

9 Mansion Row, Brompton, Gillingham, Kent.

Datastar Systems

72 DataStar will have a wide range of Commodore computers and peripherals available at extremely competitive prices. a special purchase of telephones including cordless and feature phones at never to be repeated prices will be on offer subject to being previously unsold. A representative of our sister company, Microgold, the specialist trade export company will be on hand to assist overseas buyers.

Unicom House, 182 Royal College Street, London NW1 9NN. Tel: 01-482 1711. Telex: 295931 Unicom G.

Compumart

74-75 Compumart is one of the leading mail order companies, specialising in blank disks and peripherals. Being the first company in the U.K. To offer a box of blank disks to the public for under £10, you can be sure of some very special show offers. Watch out for the amazing give-aways too. Go and see Compumart on stands 74-75 and treat yourself to some amazing deals.

71 Gracedieu Road, Loughborough, Leics. LE11 0QF. Tel: 0509 262259

Pitman Publishing

84 Pitman Publishing will be selling a wide range of books and software including books from the official Commodore publisher — Howard Sams. Books relating to all Commodore machines, including Commodore 64, 16, Plus 4, 128 and Amiga will be available. This will include the Commodore 128 Programmers Reference Guide, the successor to the best selling Commodore 64 Programmers Reference Guide. Software includes a unique C Language Compiler for Commodore 64 and a variety of business packages.

Pitman Publishing, 128 Long Acre, London. WC2E 9AN. Tel: 01-379 7383. Tlx: 261367.

Grafsales Ltd.

85 Grafsales will be showing their highly successful Grafpad II for the Commodore 64 and 128.

Already acclaimed by Commodore users, Grafsales will also show new software for the digitizer tablet, claimed to be the only device of its type. A sure "winner" at £59.50 including software.

Unit Q2, Penfold Works, Imperial Way, Watford, Herts. WD2 4YY. Tel: 0923 43942. Telex: 946024.

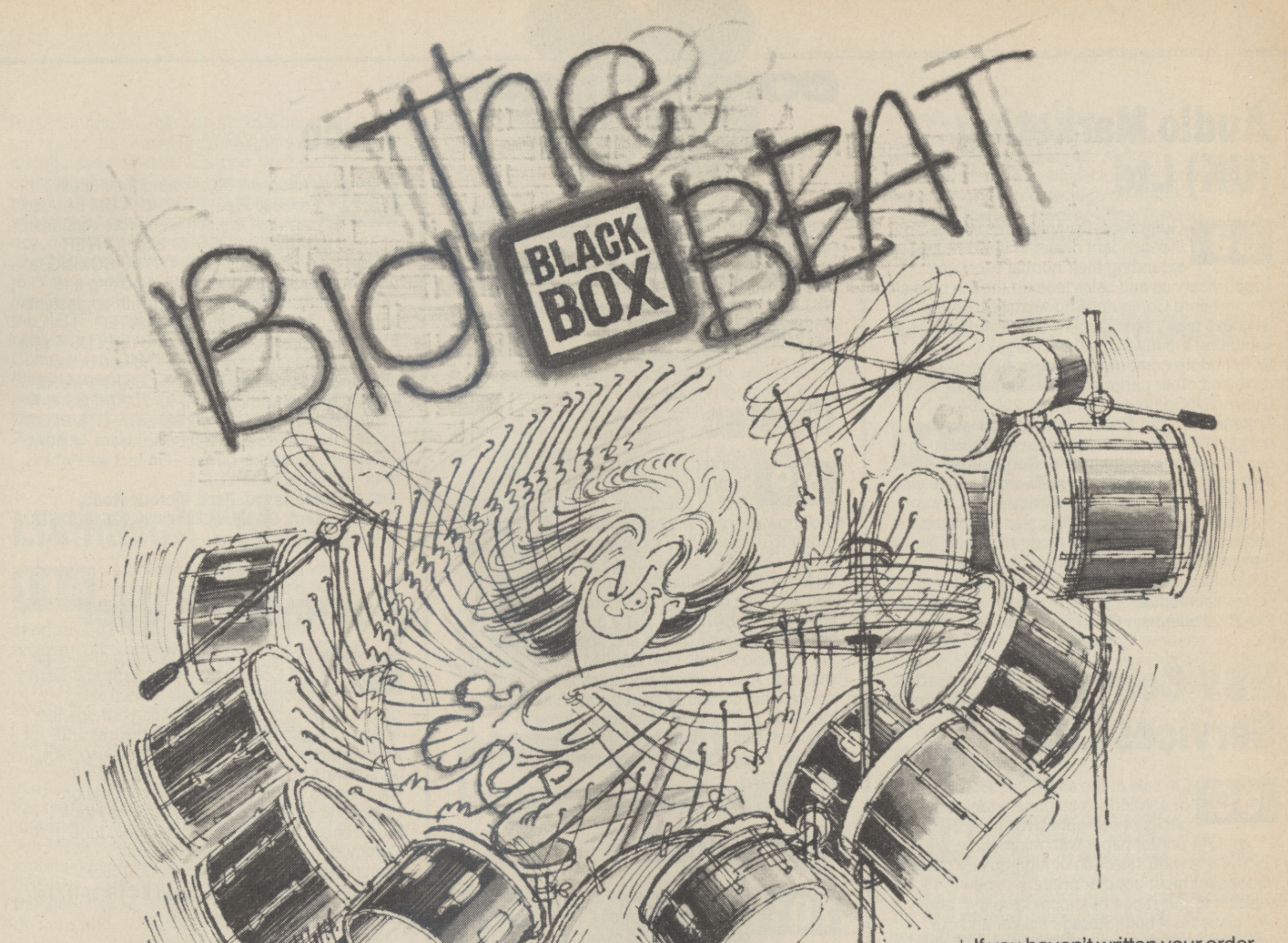
JCL Software Ltd — Microclerk

88 JCL Software have provided Software and Consultancy Services for Commodore Computers since 1979. Our established products include:—

- 'Assembler development systems for C128, Plus4, C64 and 700 (B Series).
- 'C64 IEEE 488 interfaces.
- 'EPROM Programmeers for C64 and 4000/8000 series.
- 'Enhanced BASIC for 700 (B Series).
- 'SPEEDIPEN low cost C64 word processor.
- 'MICROCLERK, Commodores integrated business system for the C128.

MICROCLERK is designed for the small businessman/retailer who deals mainly with cash accounts. It handles purchases, sales, bankings, standing orders, VAT returns (all schemes), trading reports etc. Combined in one easy-to-use program, MICROCLERK also includes filing, word processing with mail merger, calculating and all the other functions needed to run a business efficiently. Sales and purchase ledgers and payroll can be added as needed and integrate automatically. IF YOU RUN YOUR OWN BUSINESS COME AND TRY 'MICROCLERK'

1 Sheffield Road, Southborough, Tunbridge Wells, Kent, TN4 0PD. Tel: 0892 27454. Telex: 957351 ALERT G.



Syndromic Music are pleased to release the very latest version of the renowned Digidrum. The Digidrum is a fully programmable digital drum machine for the Commodore 64/128 and allows the user total control of 'live' samples so that you may design your own drum sequences as well as creating your own custom drum kits from a library of over 100 samples!

This new package includes two programs which are fully interactive with each other plus four complete drum kits: Standard, Latin, Syndrums and Glass. The software is very easy to use and has features which cannot be found on professional drum machines at many times the price! The hardware fits into the user port and has a ¼″ audio out plus an RCA phone trigger output.

As the Digidrum does not use the SID chip, a very high studio sound quality is obtained at a very low cost.

∗ STAR FEATURES ∗ Visual Programming ∗ 8 'real' drum samples in memory! ∗ Quick Loader ∗ 51 patterns and 10 songs in memory! ∗ Demonstration songs and patterns ∗ Full and easy editing, copy, insert, delete, mute, tempo features! ∗ New Editor function! ∗ Copy and Swap samples ∗ Mix/Merge two or more samples together ∗ Change the envelope of each sample! ∗ See the envelope graphically! ∗ Sample Clipping rate ∗ Alter the volume level of each sample ∗ Editor and Digidrum programs are interactive! ∗ Over 30 samples included on program disk/cassette! ∗ Create your own custom kits from available sounds ∗ Faster Access time ∗ Cassette software Turbo Loading ∗ Over 100 samples available on additional software! ∗ High Studio Sound Quality ∗ Only £79.99 Inc Vat/postage/packing! ∗

If you haven't written your order out by now and still want to hear the DIGIDRUM in action then send off for our Demonstration cassette. The cost of the cassette will be fully credited against the purchase of a DIGIDRUM system!

For those existing users of the DIGIDRUM 2, Syndromic Music can update your software to version 3 at a cost of just £14.99. Syndromic Music can also supply any type of musical software and hardware for the Commodore 64/128. We have full ranges of MIDI software from Steinberg Research, Joreth Music, Passport Designs, C-Lab, Hybrid Arts and JMS as well as MIDI keyboards, samplers, computers and computer periphary. Let us design a package for you!

Name ______________________

Address ______________________

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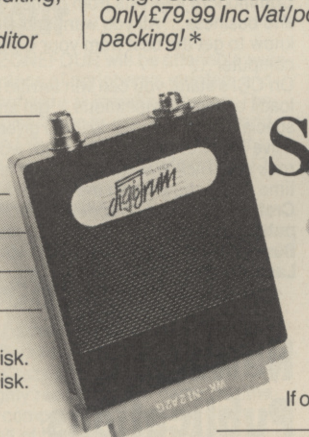
Postcode



SYNDROMIC MUSIC

Creative music for creative people

I would like to order the following:

1) TRON DIGIDRUM 3 Hardware & Software		at £79.99 Cassette/Disk.
2) TRON DIGIDRUM 3 Software Update Only		at £14.99 Cassette/Disk.
3) SOUND SET V2/1	44 Samples	at £17.99 Disk Only.
4) SOUND SET V2/2	40 Samples	at £17.99 Disk Only.
5) SOUND SET V2/3	39 Samples	at £17.99 Disk Only.
6) SOUND SET V2/23	79 Samples	at £29.99 Cassette Only.
7) DEMONSTRATION AUDIO CASSETTE		at £ 2.99

Please Note: The above prices include VAT/Postage & Packing for the UK only!
All orders should be sent to SYNDROMIC MUSIC, 35A Grove Avenue, London N10 2AS.

Overseas Postage Surcharge:
Europe – Hardware £4.00/Software £2.00
Elsewhere – Hardware £7.50/Software £4.00
If ordering Item 2 please quote your Userbase Number: ______________________

TOTAL AMOUNT OF ORDER inc postage if applicable £______
I enclose postal/money/bankers order/cheque made payable to SYNDROMIC MUSIC to the value of £______

If ordering via ACCESS –
Call 01-883 1335 for immediate clearance.

commodore

Audio Marketing (UK) Ltd

89 Gultronics, Commodores largest independant dealer in the U.K. are extending their normal excellent support service and sales team to the 7th official Commodore Computer Show, where Gultronics will have many special show offers and are exhibiting the full and largest range of Commodore computer monitors, printers, disc drive and other peripherals and software. Gultronics Computer Centre of: 200-204 Tottenham Court Road, London, W1 Have the only U.K Commodore dedicated computers centre where the full range of Commodore hardware, peripherals and software is on permanent demonstration. All at very competitive prices. Gultronics also specialise and stock the full range of Amstrad, Atari, Epsom, Sinclair, Toshiba, Juki, Brother and many more leading makes of Business and personal computers, peripherals and software.

200-204 Tottenham Court Road, London, W1.

HSV Computer Services Ltd

90 On sale at the show will be our range of continuous stationery including packs of self-adhesive labels 9½" x 11" and A4 printer paper with microperfs. We also have a wide selection of high quality printer ribbons for most popular printers. A new addition to our range of supplies are 3½" and 5 1/4" diskettes - both Storage Master and our own labelled brand are available and are fully guaranteed. We have a variety of storage boxes for 3½" and 5 1/4" diskettes. All products are at special show prices.

40-42 New Market Square, Basingstoke
RG21 1HS. Tel: 0256 463507.

Audiogenic Software Ltd.

91 Pride of place on the Audiogenic Software stand will go to the Swift Spreadsheet for the 64 and 128. widely regarded as the leading Commodore Spreadsheet for its unique combination of low price and powerful facilities. Also on show will be a new program which runs concurrently with other programs in the 64 and 128, enabling the user to switch from the main program to calculator, alarm clock, calendar, memo pad, and auto dialler, and back again. On the game front, two new games front, two new games for the C16 and Plus 4, and others for the 64, including the seasonal Graham Gooch's Test Cricket.

12 Chiltern Enterprise Centre, Station Road,
Theale, Berkshire. Tel: 0734 303663.

Comspec Communications Inc.

98 One of the first Commodore dealers in Canada with their own R&D, manufacturing and developing facilities are bringing over their products for Commodore and Amiga to the U.K. for the first time. Products which will be on display at the show wil include: the MCS 8000 — a multi-user printer network for the PC, which enables the user to connect up to 8 computers to one printer. MCS 64-8 — a Commodore 64 multi-user system. It allows up to 8 users to share disk-drives and or printers. AX 2000 — a 2 megabyte RAM Expansion board for the Amiga, quadruples the Amiga's existing memory and can be used to increase RAM and/or as a fast RAM drive.

153 Bridgeland Avenue, Unit 5, Toronto,
Ontario, Canada M6A 2Y6. Tel:
0101-416-7870617.

Centec

99 Centec are leading suppliers of floppy disks and printers to the trade and to education. For the duration of the show, Centec will be offering trade prices direct to the public — for example BASF floppy disks in boxes of 10 for just £5.99 and that includes VAT. Centec can supply most printers and all forms of floppy disks from the major leading manufacturers. Extra discounts are available for large orders and special tenders. We can also supply own labelled floppy disks if required. Also memory upgrades for leading educational computer systems such as Nimbus and 480Z by Regeard Machines. Come to Centec for all of your computer supply needs.

47 Spur Road, Orpington, Kent. BR6 0QT. Tel:
0689 85353.

Duckworth

101 A comprehensive range of books and software for all Commodore computers. C16 owners make sure you don't miss USING THE C16 just published — covering all aspects of the C16.

43 Gloucester Crescent, London NW1 7DY.
Tel: 01-485 3484.

Commodore Computing International Magazine

104 Now *incorporating* Commodore Horizons and Amiga UK — 'probably the best magazine in the Universe' — sets the style for Commodore publications everywhere... Entertaining and informative, exciting and innovative, it has unrivalled coverage of the whole range of Commodore interests from games to utilities and business... All you want and all you need to know to get the best from your Commodore computer...

On CCI's stand you can win terrific prizes in loads of easy competitions... get amazing special offers and promotional giveaways... see a live interview for Micronet with world famous rock star, Rick Wakeman... really make your time at the show worth the visit...

Croftward Limited, proprietors of CCI, also
publishers of Amiga User and Commodore
Business Magazine, C.C.I. 40 Bowling Green
Lane, London EC1R ONE.

Newsfield Publications

105 **1-2 King Street, Ludlow,**
Shropshire SY8 1DB. Tel: 0584
4603.

Anco

106 Anco will be showing their latest release WAR PLAY for CBM 64. Also on view will be pre-release versions of THAI BOXING on CBM 64 and WINTER EVENTS on C16 and PLUS 4. THAI BOXING, a unique sport combining skills of boxing and karate is a true 3D presentation with contestants able to move around the ring. WINTER EVENTS, a prestige release for C16/PLUS 4 sets of a new standard in graphics and use of the machine. Also on show will be LEGIONNAIRE SPACE PILOT and BONGO for C16/PLUS 4, A part of the stand will be occupied by C16/PLUS 4 CENTRE. On display will be software, utilities, interfaces, joysticks, books — in fact everything to do with C16 and PLUS 4.

Unit 10, Victoria Ind. Park, Victoria Road,
Dartford, Kent. DA1 5AJ Tel: 0322 92513/92518,
Telex: 892758.

Commodore User

109 Come to Stand 108/9 and challenge the Commodore User Editorial team to one of the latest screen star games playing on the stand. Plus your chance to win a Commodore music synthesiser and other great prizes, in our daily draw. Also 10% off software vouchers from Software World. Back issues half price, special discounts on books and all proceeds go to "Off the Hook". Plus a sneak preview of the new look June Commodore User. Something for all Commodore enthusiasts on Stand 108/9.

30-32 Farringdon Lane, London EC1R 3AU. Tel:
01-251 6222

Independent Compunet Club

39 The Independent Compunet Club (ICC) is the officially recognised user group on Compunet. Friendly, informative and always willing to offer assistance to new and existing Compunet members. Its committee is devoted to ensuring members get the best possible service on Compunet. For more on-line information please send your mailbox to either ICC or TJ.

21a Braodgates Avenue, Hadley Wood, Barnet,
Hertfordshire. EN4 0BNU. Tel: 01-449 3569.
Telex: Compunet ID: ICC

Power Products

110 **Power Cartridge:** The Dutch record beating Utility Cartridge. See back page of this show guide for details. £49.95 (Holland).

Power Printer 80: The world's cheapest 80 column-80 cops Commodore compatible printer. Under £100 (U.S.A.).

Power Plus: An economic Emergency Power Supply giving 10-16 minutes autonomy in case of a power failure (Sweden).

Three impressive new Commodore products, whose first appearance in the U.K. is at the show.

CAS Distribution, Ste Agathe 60170, France.
Tel: 010-33-4485 6033.

Palan Electronics Ltd

113 Palan Electronics Ltd are a Prestwich Holdings plc company — other companies within the group include Braveworld, Bush Radio, Mobile,

Palan Entertainments and Video Collection. We are one of the fastest growing home computer distributors in Western Europe. We have a comprehensive range of home computer hardware and peripherals at the stand and we will be taking this opportunity to launch three new distribution lines: The Quickshot II plus joystick — with microswitch; the Fantastic III joystick — with microswitch; the Fantastic III joystick — with built in MSX compatability; and the NEOS mouse. For details of special promotional offers and a free entry to enter Competition visit Palan on Stand 113.
Palan Electronics Ltd., Unit 10, Brunswick Industrial Park, Waterfall Road, New Southgate, London. N11 1JL. Tel: 01-368 1276. Tlx: 269023 PREST G.

Llamasoft Ltd.

114

Llamasoft markets software conceived and designed by Jeff Minter, who has produced a string of original games and has recently added a new concept to computer entertainment — the light synthesisers PSYCHEDELIA and COLOURSPACE — endless visual enjoyment for anyone who can use a joystick!
Llamasoft's CBM range now includes:
For the CBM64, 16 and VIC 20: PSYCHEDELIA — play it to music — your eyes won't believe your ears! See it on the Llamasoft stand.
For the VIC 20: VIVA VIC — VIC owners are not forgotten — this is a unique collection of eight Jeff Minter games for this machine. Great entertainment and great value! Coming soon: IRIDIS ALPHA — a new game for the CBM64, in the Minter style. The prototype will be running on the stand. MATRIX — the fast blast that was a winner on the 64 and the VIC 20 is now to be released for the CBM 16, with its stablemate LASERZONE.
49 Mount Pleasant, Tadley, Hants. RG26 6BN. Tel: 07356 44789. Telex: 265871

Level 9

115

Level 9 are showing their new adventure, "THE PRICE OF MAGIK" for Commodore 64 and 128k micros. It's the sequel to "Best Adventure 1985", "RED MOON", with even more spells and many independent creatures to control. Its other magikal features include full-sentence commands for you and your allies, a 1000 word vocabulary, 200 illustrated locations, and multi-tasking so you needn't wait while pictures draw. The recommended retail price is £9.95, but see the Level 9 stand for a special show price.
7 Kings Road, Reading, Berks. RG1 3AR. Tel: (0734) 595759.

ICPUG

120

Independent Commodore Products Users Group, is the premier computer user group in Britain. Unlike many so-called user groups, which are commercial marketing operations, ICPUG is a genuine association of computer users working together for mutual benefit. It is coordinated by a voluntary national committee with over 80 regional groups in the British Isles and overseas. Benefits of membership include regional group meetings, extensive software library, complete technical assistance, programming courses in BASIC and machine code, discounts on hardware and software, and the ICPUG Newsletter which is widely regarded as possibly the most authoritative journal on Commodore machines in the world.
30 Brancaster Road, Newbury Park, Ilford, Essex IG2 7BP. Tel: 01-579 1229.

Micro Media Computer Supplies

119

Micro Media Computer Supplies are exhibiting their wide range of computer accessories and consumables. Micro Media, who are best known for their superb mail order service to personal computer users and educational establishments, also provide a fast and efficient service to large and small companies throughout the country. Micro Media hold an extensive range of products covering diskettes, data cartridges, storage boxes, listing paper, printer ribbons, daisywheels and accessories for immediate despatch. Computer users, both local and national, who demand competitive prices and prompt delivery should contact Micro Media for all their computer supply requirements.
Micro Media Computer Supplies, Rydal Mount, Baker St., Potters Bar. ENG 2BP. Tel: 0707 50913.

Association of London Computer Clubs

132

The ALCC exists to help the many computer clubs in the Greater London area. The main aims are:

- to promote hobby and recreational computing
- to co-ordinate activities
- to help new Clubs start up
- to organise exhibitions, seminars and meetings

If you are a computer hobbyist, you'll get more out of it by going to your local Club.
7, Barrington Road, Bexleyheath, Kent, DA7 44N Tel: 01-303 8849.

Computer Bookshops Ltd

133

We carry a full range of books on all computers.
Computer Bookshops Ltd., 30 Lincoln Road, Olton, Birmingham B27 6PA. Tel: 021-706 6000. Tlx: 334361.

Zonefour

137

ZONEFOUR will be offering a wide range of peripherals, printers and software at incredible prices. The cheapest floppies in the home computer world — a box of ten Double-sided, Double-density top quality disks will set you back less than £10. Discounts for bulk purchases.
122 Dawes Street, London SE17 2EB. Tel: 01-701 6284.

Martech

140

Zoids — the battle begins, Samantha Fox strip poker and Crazy Comets are just three of Martech's highly recommended games for the Commodore computer. Special show offers are available on all of these exciting products. All three will be on show on Martech's stand.
Also don't miss exclusive previews of Martech's new releases for the Commodore.
If Zoids zapped your brain!
If Samantha Fox drove you insane!
If Crazy Comets blew your mind!
. . . just wait and see what's in store for you next!!
Looking forward to seeing you there!
Martech, Martech House, 4 Bay Terrace, Pevensey Bay, E. Sussex. BN24 6EE. Tel: 0323 758456.

DDS U.K. Computer Supplies

144

Special prices on all 5.25" disks in library cases, buy the disks and get the case free of charge, available only at stand 144. Branded BASF 5.25" disks in library cases at rock bottom Trade Prices. We are also carrying a wide stock of printer ribbons at just over cost price. Also available, ex-stock: Listing paper, Head cleaners, storage boxes and library cases. We offer Cash and Carry prices by telephone — 01-541 1144. Special prices available at exhibition, plus extra discounts for large purchases and special tenders.
Call on Stand 144 and carry away a real bargain.
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153

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AMIGA™ UPDAT

We all knew the Amiga was going to be the star of the Commodore show, Commodore itself had assured us of this; suprisingly however it wasn't CBM who showed it off to the full. That award went to the variety of software houses who had products or, as in most cases, demonstrations showing what could be done if you used the Amiga to its very extensive potential.

CCI, the only magazine to be showing a wide variety of software for the Amiga, gave demonstrations which attracted large and enthusiastic audiences, mainly due to the quantity and quality of the software we were able to present.

If you wanted to see the Amiga in its official position you had to struggle upstairs to the 'Amiga-Village', which consisted of a main area for Commodore's demo's, and a group of individual software houses who were showing products they had developed. But it was by no means a spectacular area or really exploiting the AMIGA.

Of the software houses there, the most impressive piece of 'nearly finished' software was undoubtedly Y2's Prestel emulation program, running in conjunction with an Okimate colour printer.

As well as having (or it will have soon!!) all the auto log-on features, it handled the Amiga's graphics and text very well. It also allowed you to split screens, edit one screen while looking at another, and a variety of other useful little touches that really showed how user-friendly the Amiga could be.

Of the other companies that were writing software, Enigma Developments had a game called Trivia Trove which, although sadly written in Basic, showed what a little time can do. Interlex, a company based in Kingston, showed a very early demo of there integrated office program which promises to be excellent when finished. It will include a word processor (hopefully an awful lot better than Textcraft), comes software, a spreadsheet and a database; all of which promise to be very easy to use.

Sophus tried desperately to get their organisational system KIM to work, after losing the whole thing when a disk crashed! They succeeded, but unfortunately the show finished about ten minutes later. Nice try boys!!!

PORSCHE
SACHS

One company that created a great deal of exitement, not unexpectedly, was Electronic Arts. As well as the brilliant Deluxe Paint package, they previewed three of their newest products, each of which looks just as good as DPaint! The first was Deluxe Print. Working along the same lines as Dpaint, and even allowing you to load in Dpaint files, Dprint lets you make greetings card, birthday cards, or anything else that you can print on (the EA employees were wearing tee shirts created using Dprint!).

It works using Deluxe Paint files, so if you have created a masterpiece on Dpaint, and you then decide you want to send it as a greeting card, all you do is load it into Dprint, add a message, enter what size you want the card, and hey presto, it's done. Again, the Okimate Printer was used very effectively.

Thinking A

Commodore surprised both the press and the public, when they announced the 'official' prices of the Amiga: £1475+VAT for a single drive system, and £1675+VAT for twin drives. This price, which is roughly £700 more than the equivalent US price is in my view ridiculous.

In the States, the price of the Amiga started at $1675 and was recently dropped by $500. It seems Commodore believe not in the current rate of exchange but in $1675 = £1675. Strange...

It seems likely, although Commodore would never admit it, that within six months the price could be dropped to under £1000; but what will be today's purchases think then? By the way, recently, people have criticised Commodore for not releasing Transformer, the software that will turn the Amiga into a PC clone, but why on earth bring considera-

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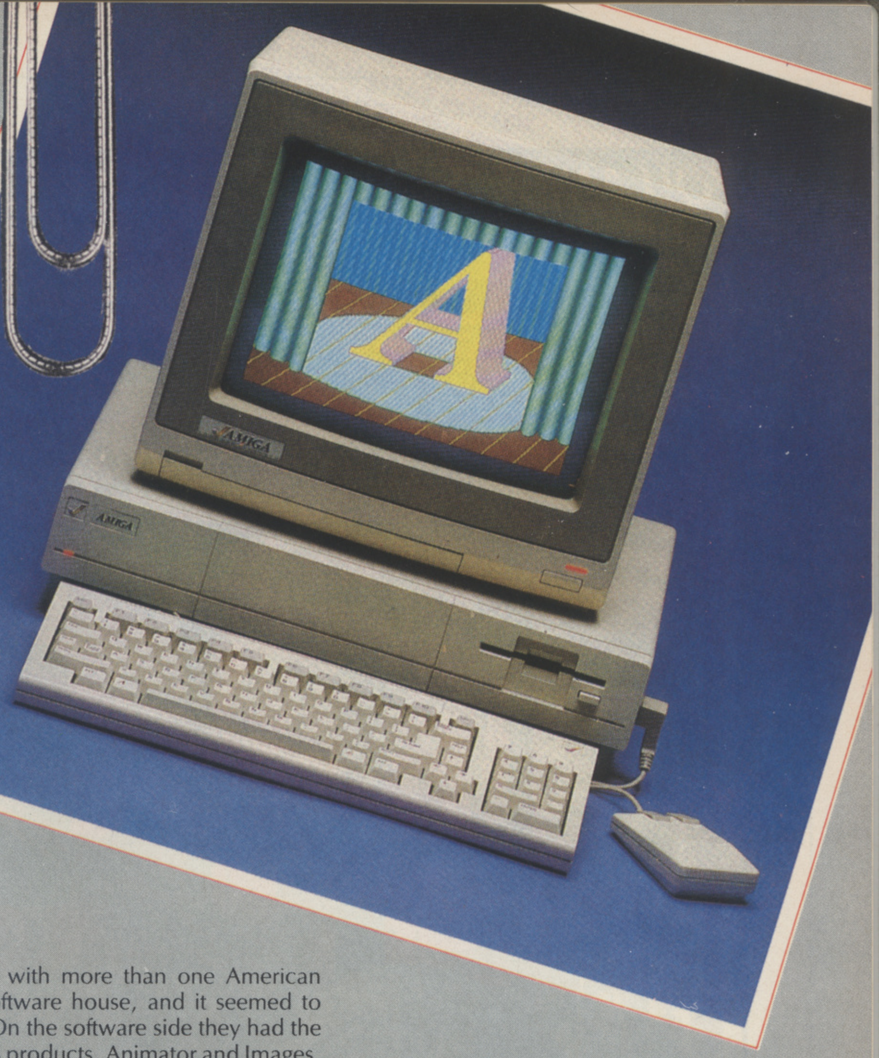
ATE



Another program from Electronic Arts that impressed everyone who saw it was Deluxe Video, this enables the end user to create animated graphics, with sound, to a standard normally associated with machine code programmers. The only program that EA showed that hadn't been seen before was Instant Music (what? no Deluxe???!). This allows even the completely unmusical to play outstanding music using the preset sounds built into the program. Very cleverly, it adjusts the variety of backing track to suit whatever is being played over the top.

Using a series of fake LED, it created a very effective and impressive feeling of control, and the sound output was also excellent.

Mistake of the show was Electronic Arts not bringing Marble Madness. More people asked about this game than almost anything else, and although I have been promised by a variety of reliable sources that the game is very nearly finished, with only the soundtrack needing to be added, no-one outside Electronic Arts and Commodore has actually seen it, so who really knows? There were, however, games to be seen, though none of them really show the Amiga off to its full. EA had both Arcticfox and Skyfox - both of which are OK if not spectacular.

Precision Software were the only company to have set up a successful importation deal with more than one American Amiga software house, and it seemed to pay off. On the software side they had the two Aegis products, Animator and Images, both of which they sold very successfully. Images is a Paint package of similar quality of Dpaint, although Aegis have employed a full time artist called Jim Sachs, who has produced by far the best pictures seen on the Amiga (including the Porsche shown here), which adds to the selling power of Images.

Animator is a much more complicated program which, as its name suggest, allows you to create complicated animations very simply. It uses normal IFF format so that pictures created on Images (or for that matter Dpaint) can be stored and used either as a background, or as a object to be animated. Having created the storyboard, you can then either replay it, or loop it - giving continous displays. One definite selling point for Animator is that currently you get Images with it free, meaning that a complete graphics and animation package costs less than £105.

On the hardware side, Precision have organised an import deal with a US company called The Micro Forge. This really will make Precision THE company to deal with for both hardware and software for the Amiga. Currently, Precision are offering The Micro Forge Seven Slot expansion and Hard Disk. The expansion allows you to make room for a whole variety of products, ranging from extra memory to sound digitisation units, all of which Precision will be able to offer.

The hard disk was especially impressive, accessing information only ten percent slower than a RAM disk (and about a million times quicker than Commodore' 3.5'' drives). They also come complete with all necessary extras including a SCSI interface, cables, and software. If there is one fault of the Micro Forge system it's that it is rather large, but in comparison with the Tecmar hard disk, it is excellent.

One of the only small companies to have come from far afield was Comspec, who travelled all the way from Toronto in Canada to show their two megabyte Amiga RAM board. Priced competitively at £599, it can either be used as straight external RAM or, as is more common, as a RAM disk. All through the show Comspec were showing the advantages of RAM disks, and I for one was definitely converted.

Music Sales were doing a very good job in showing off the Amiga's musical pretensions, with some of the nicest sampled sound I have ever heard, especially the metal sounds - which were worthy of Depeche Mode! It is probable that for the Amiga, the Commodore Samples will be available in the summer, priced around £200.

Perhaps the biggest disappointment of the show was the lack of any real enthusiasm on Commodore's part. Their demonstrations were to say the least lacklustre, with 'Preferences' seemingly the star of the show. Unless Commodore dig their heels in, and make a major drive to show the public what the Amiga can really do, it will not succeed. The software houses feel they can no longer be left to make all the effort.

Ahead?

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PC
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tion of the Amiga down to such a low level of machine?

Taken as it is, the Amiga is far superior to any PC or compatible, let's just hope that soon Commodore see sense and drop the price.

F.J.

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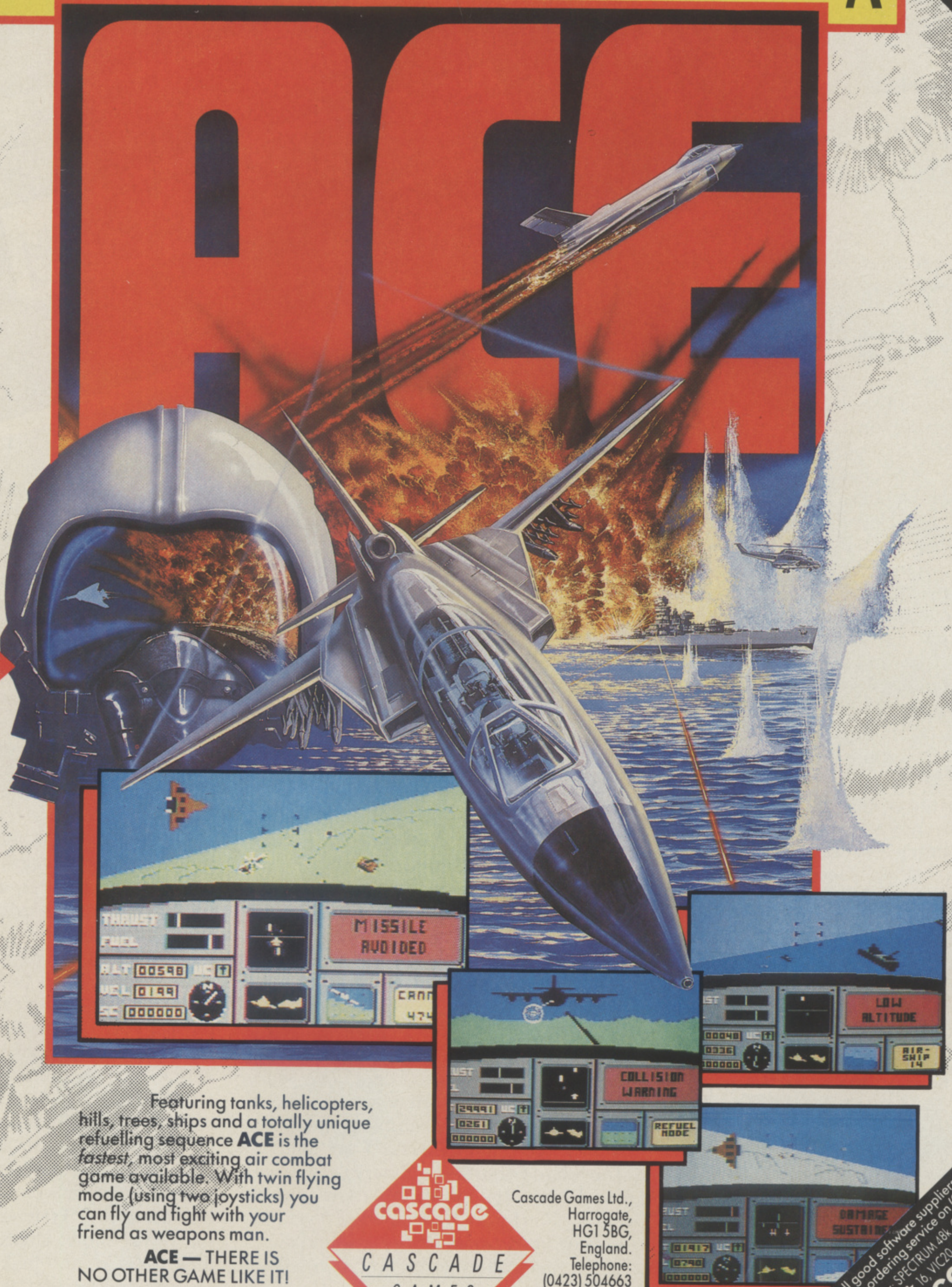
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CCI v THE ABUSER!

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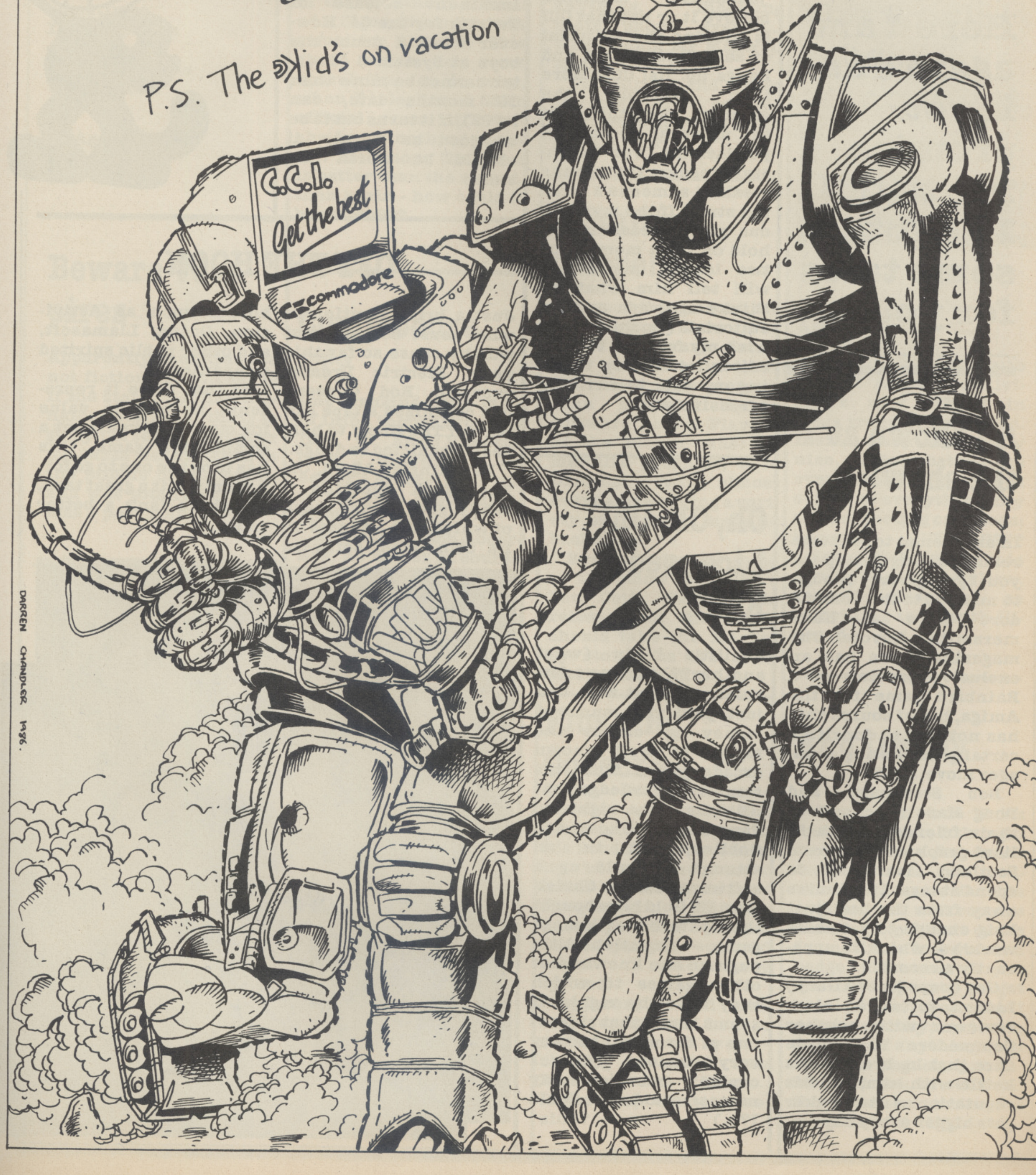
P.S. The Kid's on vacation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DARREN CHANDLER 1986.

Felix Says........ Well well well! Who said I'd never last! Here I am again and if you promise not to tell, I've got some tales for you!!

All shown at the show!

In an attempt to get some really exiting gossip for you, I got up early enough to make it to the Commodore Show at Hammersmith's Novotel. One magazine there had an exclusive preview of a Rainbird game for the Amiga, but of course this has nothing to do with a certain marketing manager move, no!!!

Bob Stevenson and Doug Hare (Jocksoft to their friends), the brilliant graphics team from Scotland managed to spend at least 15 minutes away from the bar (just long enough to get some work!) — which is apparently a record!!!

Gay (oops I mean Gary) Liddon, software reviewer with another Commodore Rag, made sure that he brought his kettle with him, and his reputation as a tea maker gets bigger every day!

A Crashing Bore ...

Someone who sounds like a moronic, introverted 13½ year old keeps phoning our office and claiming to work for 'Crash' (or could it be 'Trash'?). Anyway said 'journalist' mumbles, believe it or not that CCI is nicking the editorial of said Sinclair rag and hangs up. Us! CCI! More than probably the greatest everything in the universe accused of plagiarism! (For Trash-style readers that means stealing someone's written stuff) If the mysterious phone crasher will hold on for a moment or two longer, my editor will tell him what he thinks of Crash and its editorial. (Ouch! do I do wish my furious, violent editor would stop twisting my arm to write so agressively!)

Oh, Oh, Oh! Licensed to Kill?

A little birdy (what another??) told me a few rumours about who had just paid vast sums of money to obtain the rights to well known arcade games. Now, it's common knowledge that Elite have the rights to Paperboy and Ghosts and Goblins; but in an attempt to build up a software base for Christmas, US Gold have bought the rights to Atari's mega game — Gauntlet. Although no one knows what other games to which they have the rights, it seems likely that at least one of them will be very very famous (but I couldn't mention any names could I? Could I?...)

Better Late than Never??

As you can see from the amazing review, International Karate has actually arrived (SHOCK, HORROR, PROBE!!). But just in case you all get too excited, I can tell you that the boys at System 3 have announced the imminent release of Twister for the 64. However much I doubt the boys at System 3 (Twister cannot be more than 10 months late, can it???), if it turns out to be as good as Karate, it should be worth the wait!!

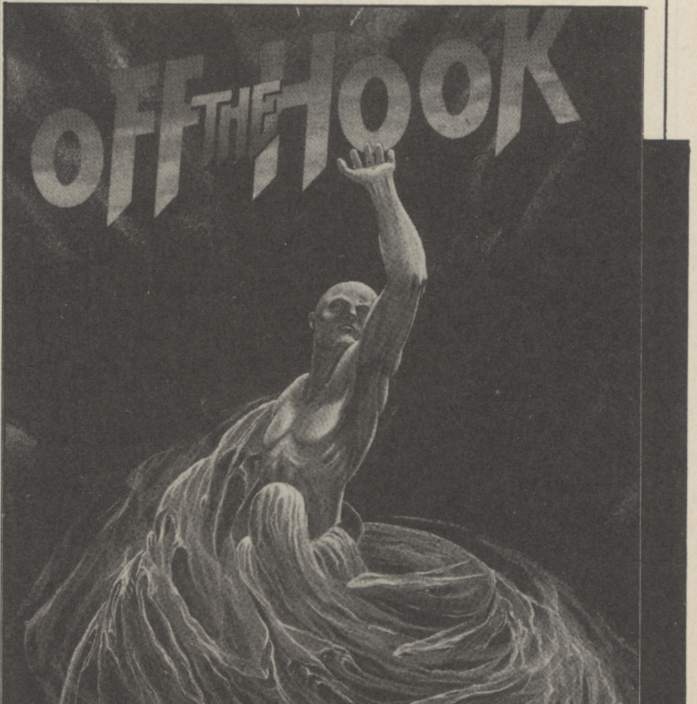
HI, FOLKS! REMEMBER ME?

OFF THE HOOK

Just a brief mention of what must be the most worthy cause so far this year. Electric Dreams supremo Rod Cousens has organised a tape called 'Off The Hook' to help people addicted to drugs.

Retailing at £8.95, Off The Hook contains 8 really good games, each of which was a sucess on its own, from software houses such as Activision, Ocean, Llamasoft, and other public spirited companies.

At that price it represents unbeatable value for money. If you want a compilation game, this has to be the one to go for, not only is it a great tape, but there isn't a better cause.



Bye Bye!!

As you may or may not have noticed, our Ad Manager PETE (THE LAD) CHANDLER had left. He will go down in history—though what for I'm not sure. To commemorate his departure I wrote a little poem:

Au revior,
Pete,
We'll miss you
sometimes.
Let's hope you
don't drink
too much on the
Winemaker!

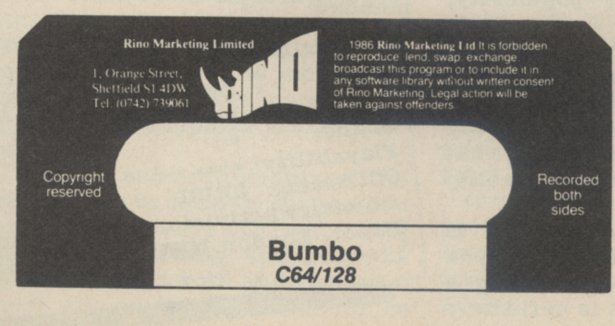
FJ Aged 69.

Beware Vampires

Apparently vampires are not fiction at all. That is if the state of Julian Rignall's neck is anything to go by!! It seems that poor old Jazza was attacked in the middle of the night, and was totally defenceless—poor man!

WHAT A BUMBER

As you can see from this cassette inlay, Rino marketing made a bit of a mistake in the printing of their latest game, Bombo (see review elsewhere). Lets hope they don't release a game called Bogger!!!



Rino Marketing Limited

1, Orange Street,
Sheffield S1 4DW
Tel. (0742) 739061

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Recorded both sides

Bumbo
C64/128

SAATCHI SAATCHI SPUTNIK!!!

In an attempt to make a dramatic entry into the world of computer games, I have received a few press releases telling me of the imminent arrival of a Sigue Sigue Sputnik game for the 64. This gives raise to some speculation as to why, when I telephoned SSS's official press officer - she knew nothing about it!!! Let's hope the game is better than the record, then again - how could it be worse???

Commodore ST?

One amazing little piece of info I thought you'd all like to hear(Honestly only following my editor's orders!) was told to me by a pretty little birdy last week:

A certain Commodore Rag, no names of course, recently devoted two psychophantic colour pages to a Atari ST adventure. Could this have anything to do with the fact that a certain marketing manager just moved?

NEVER!!! There is, we believe, no truth in the rumour that the said organ will in future be called Atari Abuser...

Do you want to be a hero

I was recently told that poor old Mirrorsoft had the disturbing experience of losing almost all their worldly posessions. Due to a mix-up over moving, they apparently had two days when they were left without anything, including their phone system... What would Mr Maxwell say???

Pat Bitton and other Mirrorsofters covered their modesty with a silk Biggles scarf...

Metallix galore!!!

One good thing about the Commodore Show was that I saw many games that were not finished, and some that weren't even produced by a software house! Flavour of the month must be mettalix graphics, a la Uridium — with almost every game having a variety of coloured metallic backdrops.

Best unreleased game of the show was CRL's Tau Ceti. When it is released for the 64, it should take the market by storm, as it's absolutely brilliant.

Flushing Cousens

Quite what Electric Dreams supremo, Rod Cousens, was doing with his head in close proximity to a French train toilet - I will leave to your imagination. Unfortunately poor Rod's contact lenses jumped out and were conclusively ejected!

Apparently Rod was most upset and had to console himself by purchasing a brand new Porsche 911 Targa... Recession, what recession?

That's all for this month Byeeeeeee ee! from the world's most famous cat, FELIX!

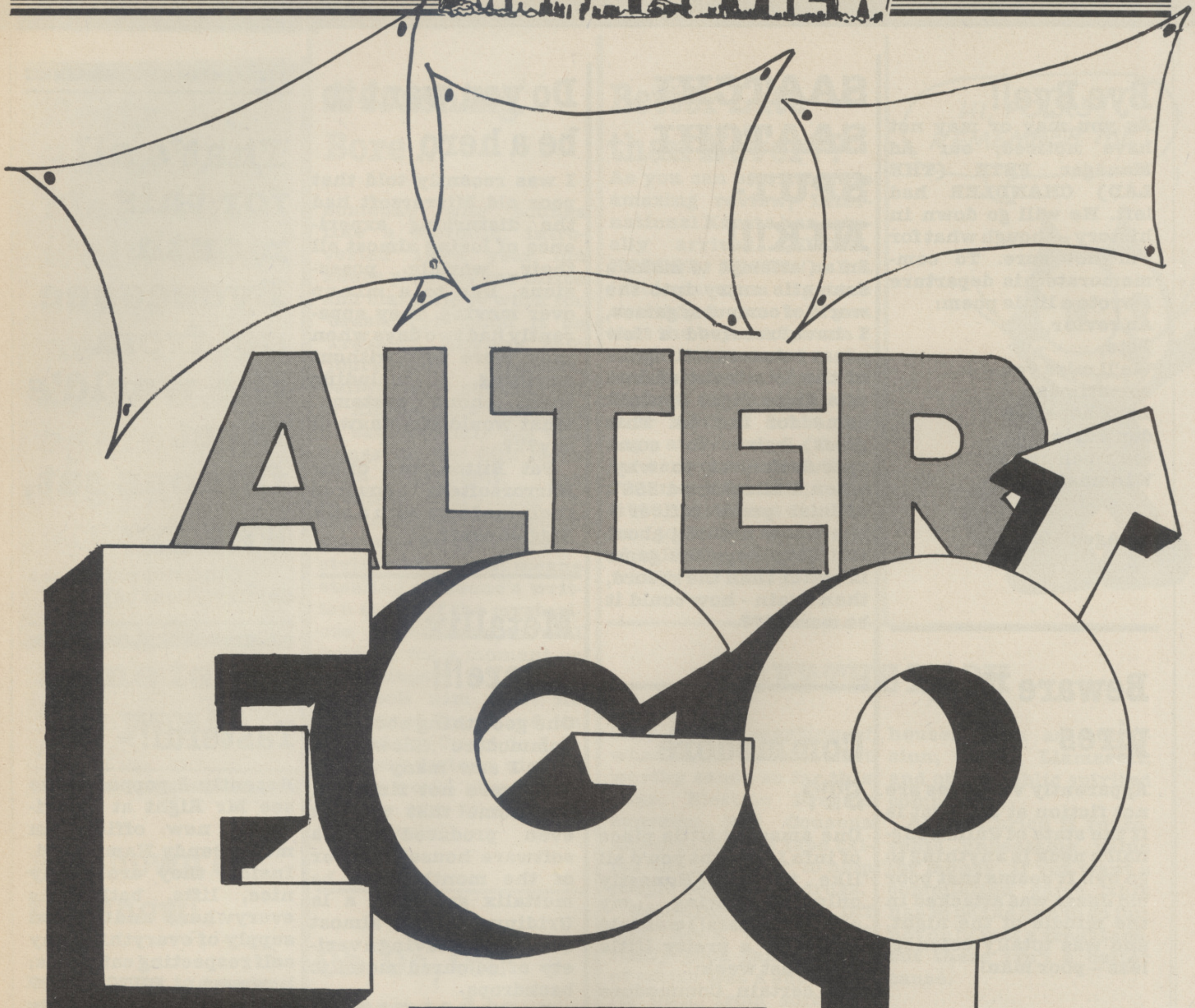
(And stop calling me Shirley!) Cont page 94.

Tasteful!

Recently I popped up to see Mr Right at Activision's new offices in mega trendy Hampstead. Inside, they are really nice, lifts, bathrooms everywhere and a good supply of everything any self respecting cat needs; however OUTSIDE??? Colour? 23 Pond Street is a vile shade of yellow, recently described as something to do with illness!!

And finally

For all you true Felix fans out there, I thought I'd tell you a few basic facts. If you are mentioned by name in this section, you will receive a metallic portrait of me (sometimes known as a badge). However if you are so desperate to get hold of one, yet aren't gossip worthy, write to me about anything you think is vaguely printable, and you to could be the proud owner of one of my beautiful effigies!!

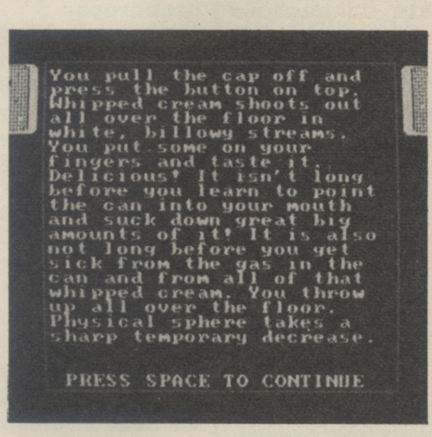


ALTER EGO

Recently, Activision's American half has been less prolific than its English side, Electric Dreams. Alter Ego is the newest release by Activision from America, and it is both novel and enjoyable.

No longer is it enough for large companies to release a game, now it has to be involving and stimulating, as well as graphically brilliant! Graphically, Alter Ego is nothing special, but if you want to get involved in a game that can make you laugh, cry, or scream, then it's for you.

The only way I can think of describing Alter Ego is an 'experience monitor', I know that sounds wierd, but it's true. To play the game you must first answer some questions that will determine your personality status. Having completed this task the program lets you travel through life making decisions that affect various aspects; happiness, popularity, intelligence etc.



```
You pull the cap off and
press the button on top.
Whipped cream shoots out
all over the floor in
white, billowy streams.
You put some on your
fingers and taste it.
Delicious! It isn't long
before you learn to point
the can into your mouth
and suck down great big
amounts of it! It is also
not long before you get
sick from the gas in the
can and from all of that
whipped cream. You throw
up all over the floor.
Physical sphere takes a
sharp temporary decrease.

PRESS SPACE TO CONTINUE
```

From leaving the womb, all the way to death, you see what might happen if you react in certain ways. It does have some slightly sexually explicit sections, but these can be skipped quite easily, if you wish.

If you've always wanted to relive your school days, or if you want to see how easy being a parent is, this game is definitely for you - I must say however that it can affect certain people; Andrew Wright of Activision has never been the same since he refused to go to the doctor over a ' little spot'......

Highly amusing and recommended!

Price:	£24.99 (Disk only)
Graphics:	**
Sound:	**
Playability:	****
CCI Rating:	CRISP

*Contact:*Activision, 23 Pond Street, London NW3. Tel: 01-431 1101

CCI Rating

NAFF

V

Having been announced about 9 months ago, most of the people I know had completely forgotten that V existed, let alone that it was a game for the 64! I was never really a fan of the television series, which I found worse than most of the American trash, but the ratings for it were high and there are V clubs all over Europe.

The game itself seems to have been both well programmed and accurate (to a degree!) to the TV scenario. You take on the role of Donovon, and you must travel around the Reptilian's mother ship laying explosive charges in 5 critical areas. All is not as easy as it may seem, however, as not only are there various nasties that will do their best to nasty you fatally, but to travel around you must crack some really impossible codes!

Your health and fire-power are both monitored on-screen, and if you make contact with too many reptilians, your heart rate increases and you die!

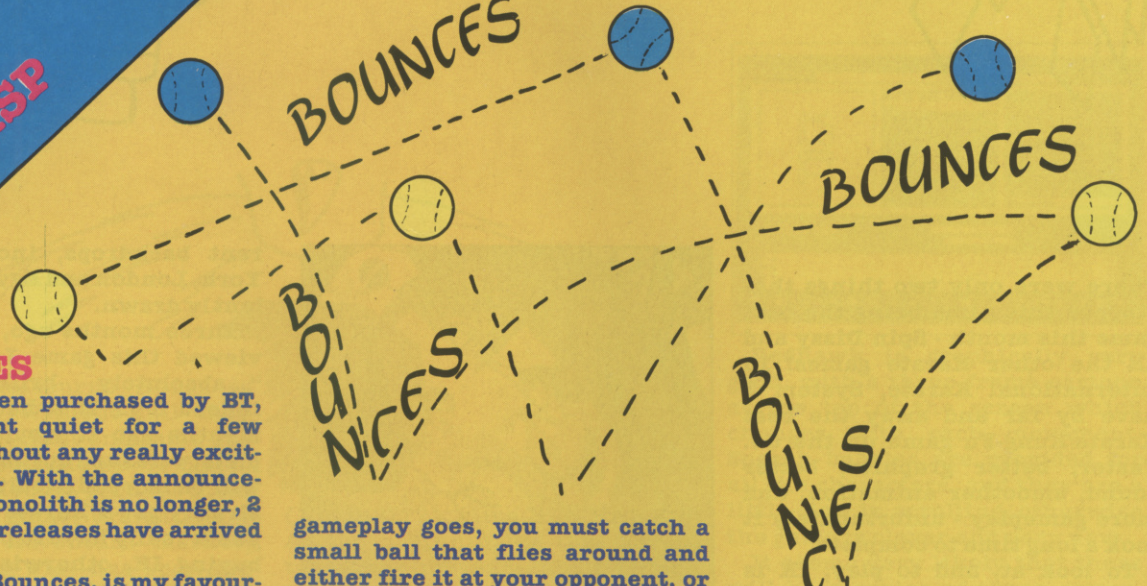
Graphically, V is good, with smooth scrolling and some excellent backgrounds, as a game however it is less impressive. V lacks a degree of gameplay which makes extended sessions tedious and getting involved very difficult. Nor is the sound special enough to warrant any special mention.

Overall, unfortunately, V is no more than average.

Price: 8.95
Graphics: ***
Sound: **
Playability: **
CCI Rating: NAFF
*Contact:*Ocean Software Ltd, 6 Central Street, Manchester.

CCI Rating

CRISP



BOUNCES

Having been purchased by BT, Beyond went quiet for a few months, without any really exciting releases. With the announcement that Monolith is no longer, 2 new Beyond releases have arrived this month.

The first, Bounces, is my favourite. Upon loading, it endeared itself to me immediately with a brilliant tune! At the moment it seems that more and more people are taking computer music seriously.

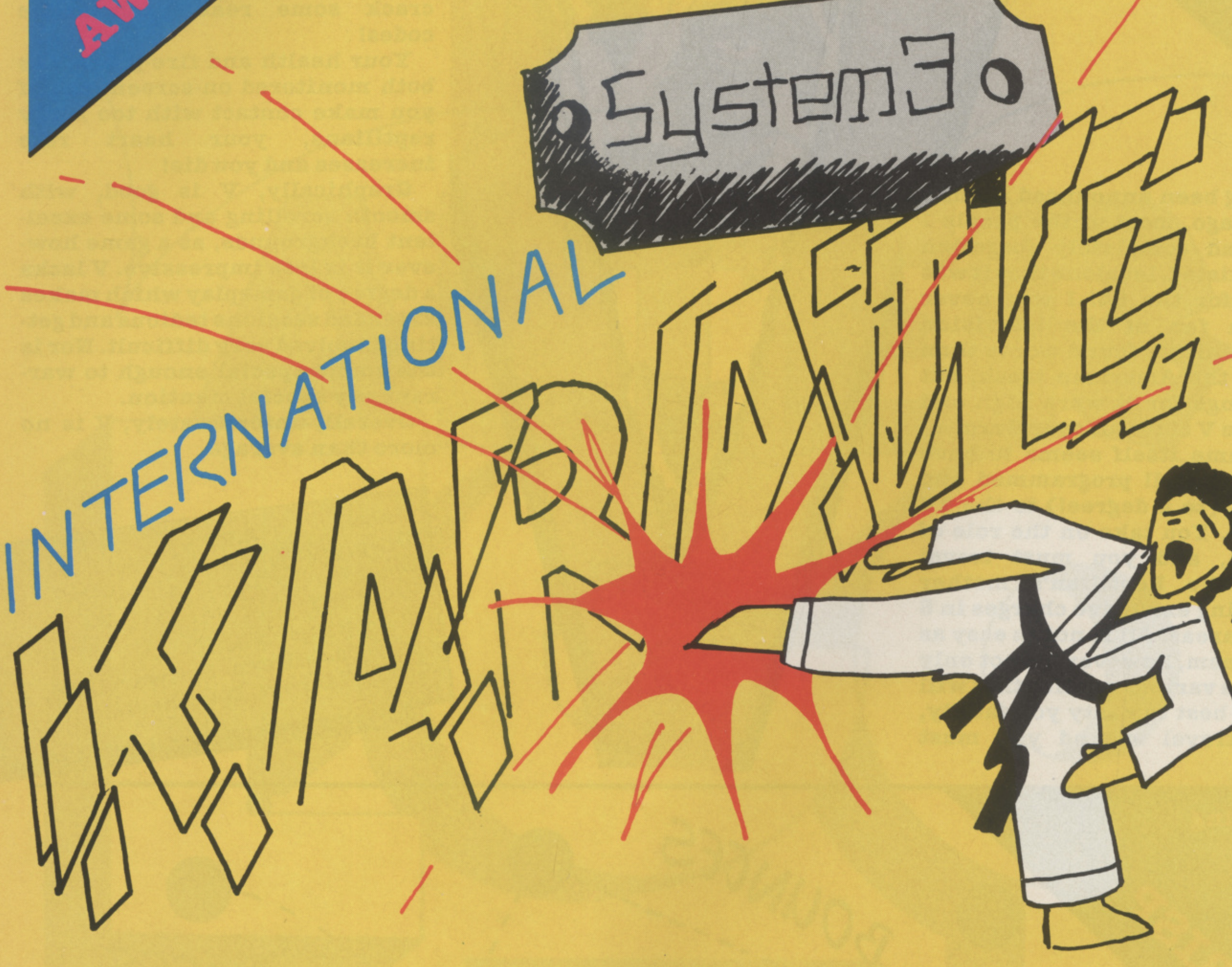
Bounces seems to combine different games to come up with an odd amalgamation of a sports/fighting game. Graphically the game is good, although both and you opponent are pretty small. As far as gameplay goes, you must catch a small ball that flies around and either fire it at your opponent, or score with it - points are awarded for either.

This may sound easy, but you must also contend with being tied, by elastic, to a wall. You can imagine how difficult the game gets!

Overall, a good comback game, programmed by the now famous Denton Designs (but with no icons!!!), it is both playable and pretty.

Price: £9.95
Graphics: ****
Sound: ****
Playability: ***
CCI Rating: CRISP
*Contact:*Beyond Software, Wellington Hse, Upper St, Martins Lane, London WC2H 9DL.

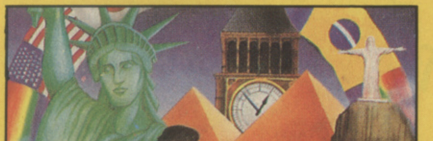
CCI Rating
AWESOME



International Karate.

There were only two things that stopped this game being the best game this month - Spin Dizzy and all the other Karate games! In International Karate, System 3 have by far and away the best Karate/Kung-Fu game on the 64. Faster, better graphics, better sound, smoother animation, and more gameplay - unfortunately it took a long time to complete.

To look at, and to play, IK is damn nearly as perfect as you are ever going to get on a 64. You have a wide range of punches and kicks, all of which are executed perfectly. You can play against the computer or a human opponent, and not only do you have normal Karate sections, but at certain stages you have other agreeable oriental tests, such as smashing paving slabs with your head, and jumping over arrows and spears!



At the bottom of the screen it says..."Graphics by Archer Maclean", and they are great. Musically, it's an eleven minute soundtrack by Rob Hubbard and is his best piece yet; varied and atmospheric.

Another nice touch is the assorted settings for the game. On each side of the tape are 3 different backdrops, including New York, London and Egypt - all excellently drawn.

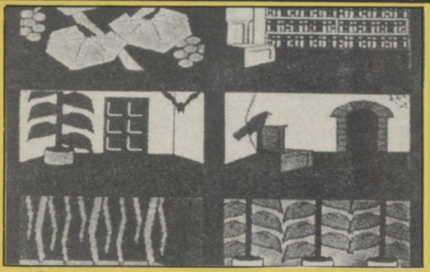
Three months ago, when I previewed this game I said it was "...absolutely brilliant", and indeed it is. If it had come out 6 months ago it would have completely cleaned up; now however it will be more difficult. If you have already got 4 Karate games, then you'll really have to ponder before buying IK, otherwise, at £6.50, you can't lose!

Graphics: *****
Sound: *****
Playability: ****
CCI Rating: AWESOME
Contact: System 3, Davis House,
29 Hatton Garden, London EC1.
Tel: 01-831 7395.

CCI Rating

MEGA

the Price of MAGIK
KG



THE PRICE OF MAGIK

Every time a new Level 9 game arrives in the office, I know that I'll be glued to the computer for many, many hours! I'm not a mad adventure fan, most of them are just too long-winded, but all the Level 9 adventures I have reviewed are both interesting and compulsive, and the Price Of Magik is no exception.

This adventure is different from the majority of adventures in one big way......there are no treasures! The Price Of Magik is all about learning how to use the vast amount of magic spells that you discover in your travels.

At the beginning of the adventure you know absolutely nothing about casting spells, in fact you know nothing about anything! You must gradually develop your knowledge until you can turn men into frogs and frogs into Andrew Wright!

In total you must learn eighteen spells, they vary from the most mundane to the absolutely impossible, and only the very best adventurers have even a hope of finishing this game!

One innovational touch of this game that has to be mentioned is the inclusion of a Lenslok. This is a anti-copying device that means you need this little device to make sure you bought the original copy.

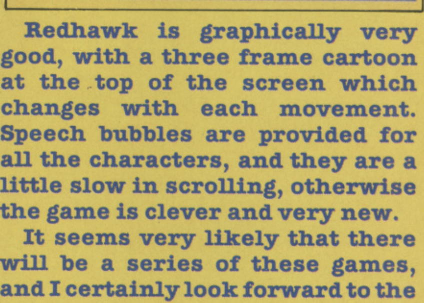
Without doubt, I enjoyed this adventure as much, if not more than any other Level 9 game. By using a slightly different type of storyline they have managed to make it longer lasting and more addictive. I'M GETTING BORED SAYING HOW GOOD LEVEL 9 ADVENTURES ARE, SUFFICE IT TO SAY, FOR 64 OWNERS, THEY ARE THE BEST!

Price:	£9.95
Graphics:	****
Sound:	N/A
Playability:	****
CCI Rating:	MEGA

Contact: Level 9, P.O. Box 39, Weston-super-Mare, Avon BS24 9UR.

CCI Rating

CRISP



RED HAWK

One thing Melbourne House is innovational. Without fail they will release at least one game per year than affects the whole games market. The Hobbit, perhaps their most famous game, dramatically changed the adventure market; and Exploding Fist has spawned no less than 6 other Karate Games.

Their latest release, Red Hawk, may well do exactly the same. The phrase 'Cartoon Animation' is very overused by games companies, and varies from smooth movement to jerky blobs! Red Hawk does not claim Cartoon Animation. It IS a cartoon!

Interactive is the only way to describe this game. You take on the role of Superhero Kevin Oliver (Kevin????), alias RED HAWK!!!! At the beginning of this adventure, you find yourself outside the hospital; unfortunately you have no memory....except for the word "KWAH".

As you soon find out "KWAH" turns you from Kevin to Redhawk. To succeed in this game you must first apprehend a minor criminal and take him to the police station, they will then trust you enough to be given a radio. Having done this you must solve the major happening, a lethal bomb (aren't they all?) at the power station.

Redhawk is graphically very good, with a three frame cartoon at the top of the screen which changes with each movement. Speech bubbles are provided for all the characters, and they are a little slow in scrolling, otherwise the game is clever and very new.

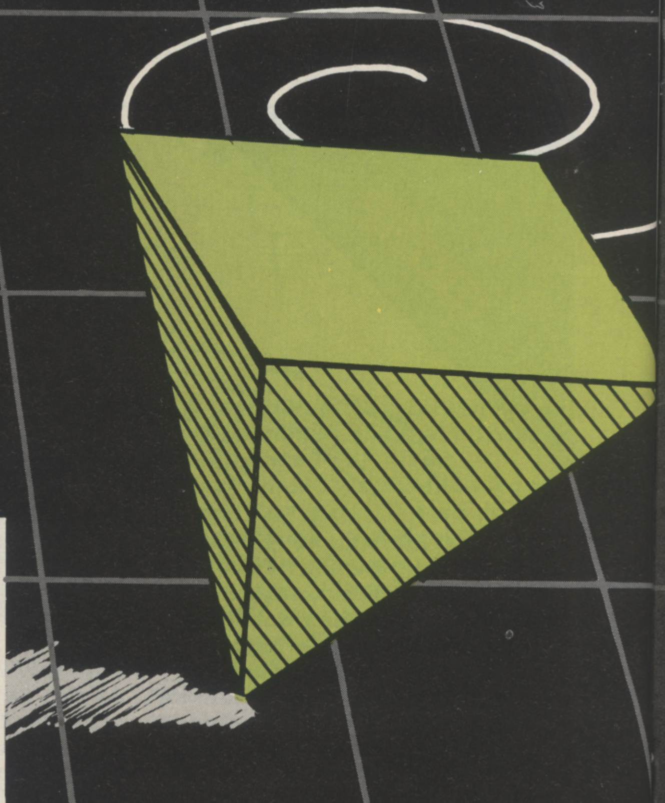
It seems very likely that there will be a series of these games, and I certainly look forward to the next one!

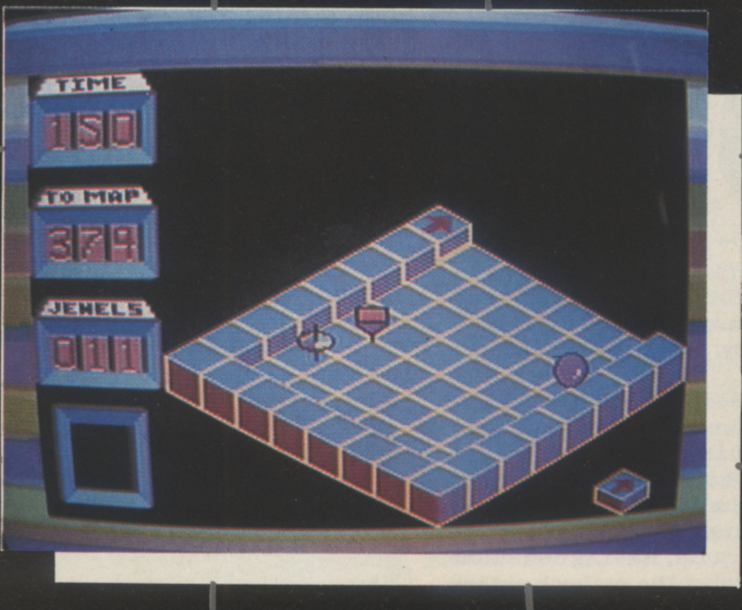
Price:	£8.95
Graphics:	****
Sound:	***
Playability:	****
CCI Rating:	CRISP

Contact: Melbourne House, 60 High Street, Hampton Wick, Kingston-upon-Thames, Surrey KT1 4DB.

CCI
GAMESWORLD
MEGASTAR AWARD

Spindizzy

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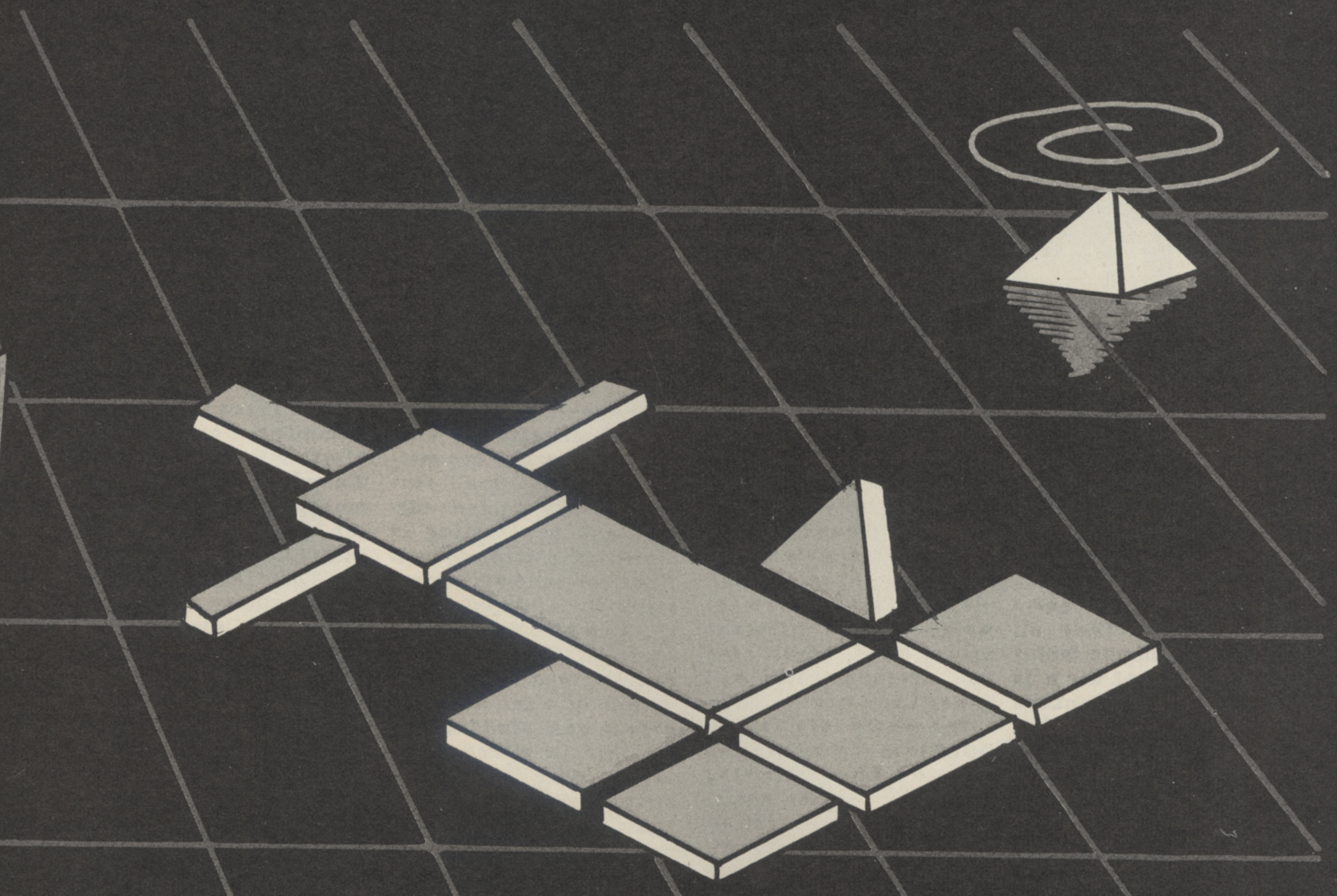


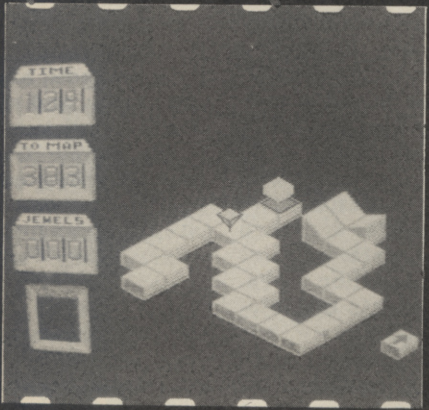
Spin Dizzy.

Almost any home computer games buff will tell you that if there were just one game that he wished he could have from the arcades, it would be Marble Madness. This game captured the imagination of a massive group, but there has never really been a satisfactory version for the 64.

Gyroscope by Melbourne House was an OK attempt, but due to bugs, and very little care, it never really fulfilled its originators potential.

Spin Dizzy, the latest release from Electric Dreams, is just the thing to get Marble Madness fans cheering! Although not identical to MM, for a start it doesn't have scrolling screens, Spin Dizzy is so good that in many ways I prefer it to the original - and I loved Madness!

To be sucessful in SD you must travel around a maze, made up of quasi 3-D planes. Graphically, SD is very similar to MM (excuse all the initials!), with excellent 3-D representation. What makes SD so superb is the amazing care that has gone into this game. If an object such as a tower gets in your view, you can rotate the image, until you can see properly!



You play Gerald, who can be a ball, a gyroscope, or a diamond, each of which are graphically beautiful; and you must map nearly 300 different screens, many with lifts, enclaves and other puzzles. Making this task more difficult is the fact that you must map all the screens before your time runs out! To aid you are some crystals which add vital seconds to your ever decreasing time.

When it was first released on the Amstrad, someone told me that it was one of the best three games – but I presumed that was because there are only about 5 games for the Amstrad! When my copy arrived for the 64 I was forced to eat my words. I must say that in my view this is one of, if not THE, best game I have ever played. Graphically it is superb, the sound effects are good – but unfortunately there is no sound track - and it is so addictive as to be destructive to all other tasks!

I loved this game, and I cannot recommend it highly enough, if you have to buy one game this year, make sure it's Spin Dizzy, you won't regret it! P.S. It gets my vote for game of the year!

Graphics: *****
Sound: ****
Playability: *****
£9.99
CCI Rating: Totally AWESOME!!!
Contact: Electric Dreams, 31 Carlton Crescent, Southampton, Hampshire SO1 2EW. Tel: 0703 229694.

MUG'S GAME?

As you can see from the title, this is now a MUG (Multi-User Game) page, instead of being only a MUD page. I thought that the time had come to look at other Mug's. Although you may not realise it, Mud is only one game among many. They all share one common factor though; none of them is finished! Last month I wrote a feature on Mud2. This month centres around a new game I've been playing, called GODS.

Although the game has been around for some time now, and has been in development for over a year, very little has been heard of it; strange, seeing as in many ways it is totally unlike Mud. A lot of Mug's tend to be heavily influenced by Mud, because the authors have invariably played it extensively, and the most notable 'carry-over' seems to be the swamp. Nearly all Mugs have a swamp, or its equivalent, where players drop treasure they have found to earn experience points. GODS is not an exeption to this, but the way you go about getting points is refreshingly different.

On finding treasure, you can VALUE it. A little man appears and scrutinises the item, and then tells you what it would be worth in both experience points (or magic points as they are called in GODS) and in gold. Items can either be sold to various traders and stalls, or they can be OFFERED to the Gods. However, to sell the item, it must first have a monetary value, and secondly, you must find the right trader to sell it to! For example, the flagon cannot be sold to the General Store, but only to the Wine Trader, and the shoes can only be sold to the second-hand clothes stall, etc. Many items are worth both gold and magic points, so you must weigh up the different values, and advantages and decide which will benefit you most.

The whole idea behind GODS is to reach the rank of God. After climbing the ladder on the social scale, you then start all over again in priesthood. Once you have reached that much coveted rank of God, you are given a temple. Unlike Mud, unless you are careful, you will not be a God for long. Any magical powers that you use as a God drain your magic points. If they fall below a certain level, then you lose your Godship. To replenish your mp's, you must somehow entice the mortals to offer treasure to YOUR temple, and not to one of the other God's. You can do this by helping them, obviously, but there is a much more interesting method. To explain this, I must first describe the system by which you enter GODS.

Each player, after logging on for the first time, is allocated a hotel room, which is the first location that the character is dumped in when they enter the land. This hotel room can be customized, and as you go up in rank, you can even expand that one room into a suite! My room, for example, goes something along the lines of:

Tomb of Zaphod

You are in the Tomb of Zaphod the Arch-Wizard, your senses overawed by the immensity of this room. The walls are mirrored, and are surrounded by golden edging, and the ceiling is plated in platinum leaf. The floor upon which you stand is covered by a thick, white carpet. The room is fitting for an Arch-Wizard. In the corner of a far wall you espy a gem studded portal, laid in which is an oaken door banded in silver, gold, and platinum. Unfortunately, you cannot steal anything, for it is all guarded by his trusty, and invisible servant, Stripey.

Rather grand eh! When you quit the game, certain possesions that you may have picked up, such as a backpack, or possibly a weapon, are left in your room and are there when you return. To get back to how Gods help mortals, they can leave 'spell-packs' for the mortal in his/her hotel room, where they will stay until that player returns. If one player, lets say Ugh, has been killed by another player, Nookie, then Ugh might propose to his friendly neighbourhood God "I'll drop all the treasure I get in your temple if you'll leave me a spell pack that'll kill Nookie". Now although this is a rather extreme example, it serves to illustrate what can be done! It brings a much greater sense of reality within the game, as events and objects can be carrried over from one session to the next.

Your description can also be personalised. Mine says 'Zaphod the Arch-Wizard is here, serenely hovering a few inches above the ground, humming quietly to himslef'. Lucy's says 'Lucy is here, flexing her muscles'; so each person can really stand out as an individual, and not just xxx the legend. Ranks are not shown next to the name, but players can make a good guess at the person's rank from their description.

You may have noticed that in my room description it mentioned Stripey. In the future, players will be able to have pets, which will follow them around, get into fights with other players' pets, and get lost. You of course will have to go and sort these situations out! The bright side to this is that each pet has its own skills. Monkeys will be good at stealing, and perhaps a fire-lizard might perch on your shoulder and ward off would-be attackers with belches of flame.

What all this indicates is a very flexible game structure, so that new features can be added with ease. You can log-on to GODS on: 01-994 9119 8 data bits, no parity, 300/300 or 1200/75. The game may go onto PSS soon. Subscription costs £23 pa, but there is no play-time charge yet, and the authors assure me there will be no charge until the game is almost finished.

Next month the Mug page will feature IMAGE- another new multi-user game that is coming along nicely. Until then:

---*Zaphod the Arch-Wizard has just disappeared in a puff of smoke.

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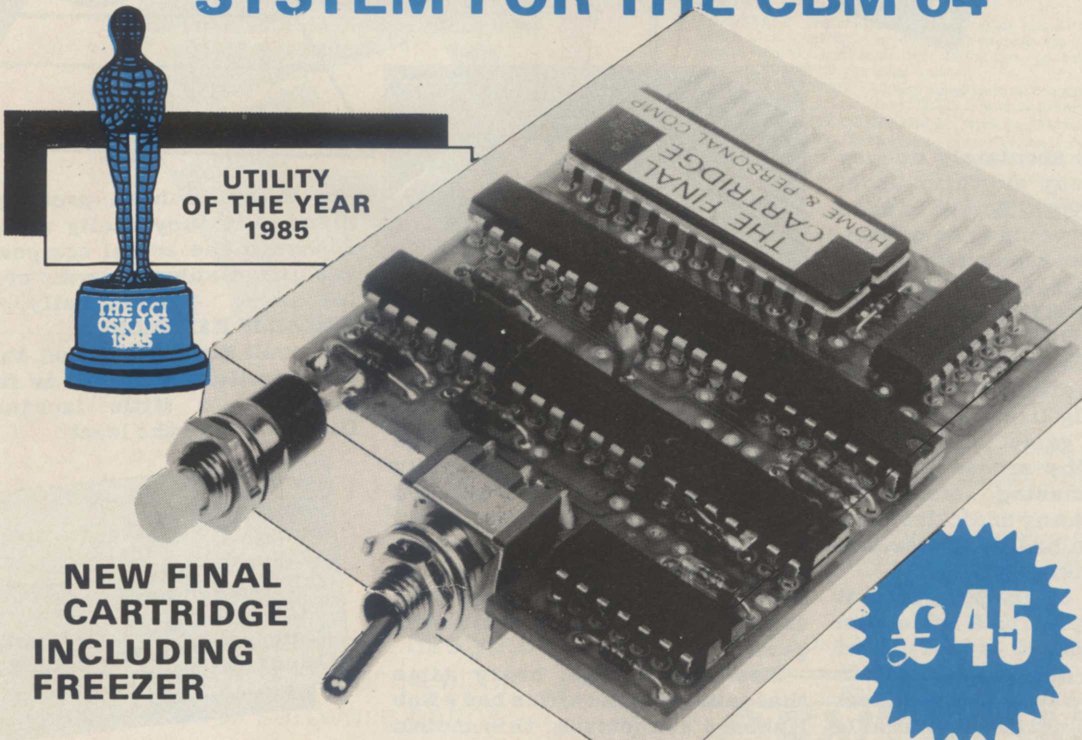

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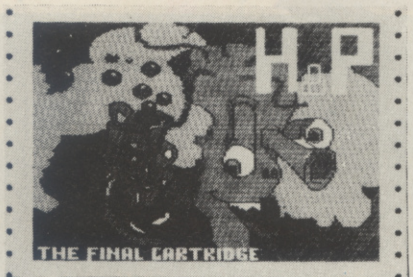

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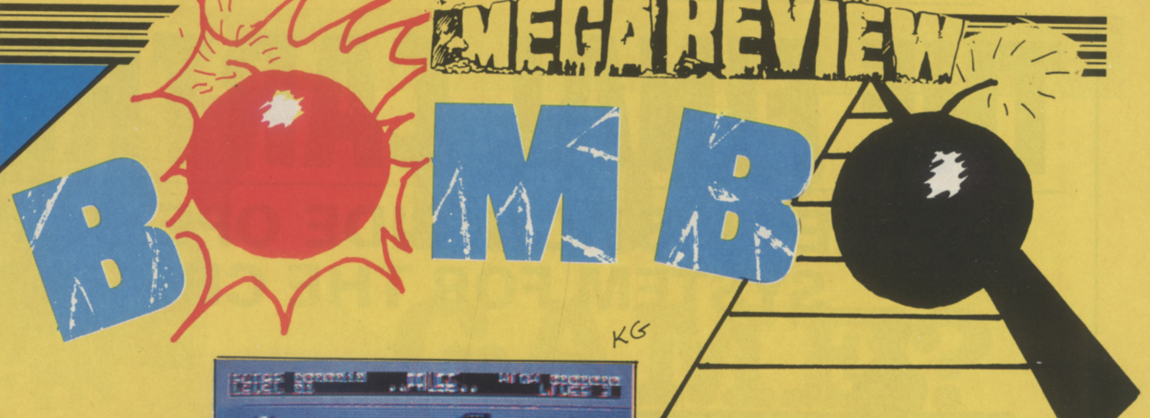
* works with C128 in the 64 mode.

CCI Rating

IFFY

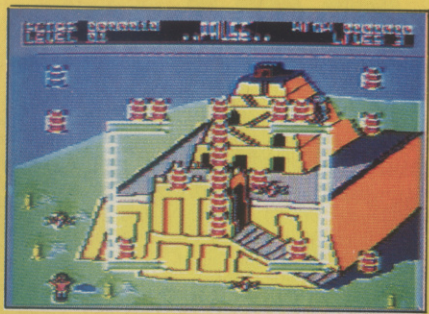


BOMBO

Now, there is absolutely no way that I would say anything about the resemblance of Bombo to Bomjack, not only would it be unethical, but it seems highly likely that Elite might agree with me, and then where would we be???

Rino Marketing, another leg of Alligata, have released this game about 4 weeks after Elite released their 'officially licensed version' of the arcade game. Now, I am a great fan of the arcade game, it combines amazing simplicity with very uncanny addictiveness. Rino's version has the latter, but lacks the former (eh??).

Bombo is a ledge game, and it involves you playing a little man who must collect a series of bombs. These can be collected in any order, however if you collect the lit ones, a not inconsiderable bonus is gained.



As you would expect, Bombo has some well defined, if a little large sprites on the screen - especially the spinning black ball - and you play a little man who can jump, and very nearly hovver. One of the nice graphical features is the backgrounds, which are well drawn and add a great deal to the game.

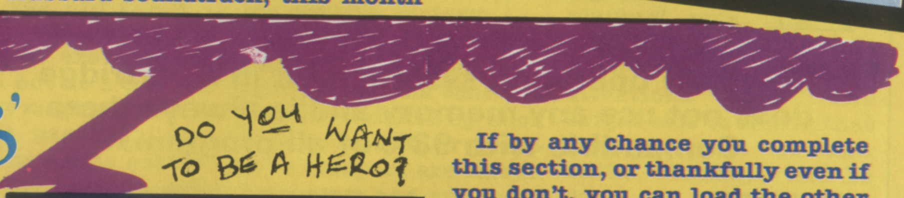
Two months ago, every game that came into the office had a Rob Hubbard soundtrack, this month We M.U.S.I.C have produced as many, and they really are good. Although the actual composition is a little clanky - for want of a better word - technically, THE SOUND IS EXCELLENT.

Overall Bombo is a good, though not excellent game. It is fun to play, but a little lacking in finesse, to say the least!

Price: £7.95
Graphics: ***
Sound: ****
Playability: ***
CCI Rating: IFFY
Contact: Rino Marketing, 1 Orange Street, Sheffield S1 4DW.
Tel: 0742 739061.

CCI Rating

MEGA

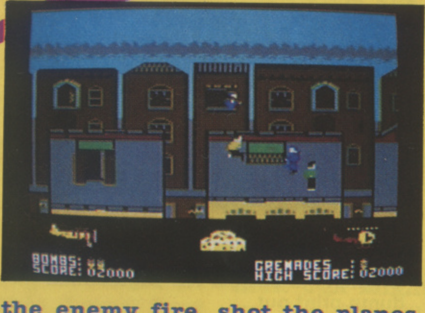

DO YOU WANT TO BE A HERO?

BIGGLES

Without doubt the quote of the year must go to a certain unnamed journalist who, upon seeing Mirrorsoft's latest release exclaimed "Who is this Big Les anyway??"

This 'Big Les' is the latest and greatest release from Mirrorsoft, and together with a good film tie in, it promises to be whopping.

What makes Biggles so enjoyable to play, and so long lasting are the many different sections of the game. On the first side of the tape is the 'arcade section'. This consists of two levels set in WWI (1917) and one set in London (1986). In the first of the WWI sections you must fly your biplane over the trenches, avoiding enemy planes and hostile ground to air barrages. Having dodged all the enemy fire, shot the planes and bombed the weapon dumps, for which you get extra bombs, you must take photographs of the evil enemies 'Sound Weapon'.



If you die in the plane, a flash of lightning travels across the screen and you are in 1986. You play two people - Biggles and his time-twin Jim - and you must guide them in a mad dash safely across London's rooftops, again avoiding enemies and crossfire. Again death leads to a timewarp, and you are back in the trenches of 1917. In a horizontally scrolling version of Commando, together with grenades and machine guns.

If by any chance you complete this section, or thankfully even if you don't, you can load the other side of the tape and experience the Adventure/Simulator game in which you must destroy the 'Sound Weapon' - but first you must locate it...

Graphically, Biggles is excellent, even if the sprites are a little chunky. Each section has been carefully programmed, and each is very playable. Having so many different things to do, Biggles will remain a favourite for quite a while.

Ben Dalglish and Tony Crowthers' music is really good, they are now well and truly in the Hubbard and Galway class. If you can't afford too many games, so want each of them to last, this one certainly fits the bill, and I must admit, I loved it!

Price: £9.95
Graphics: ****
Sound: *****
Playability: ****
CCI Rating: MEGA
Contact: Mirrorsoft, Strand House, 10 New Fetter Lane, EC4.
Tel: 01-583 1199.

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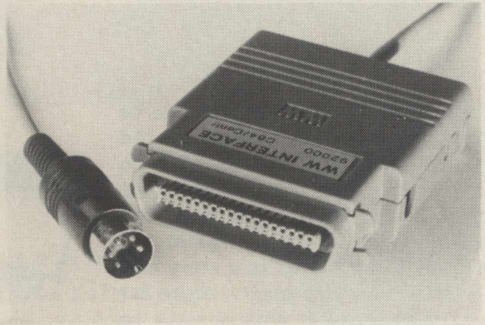

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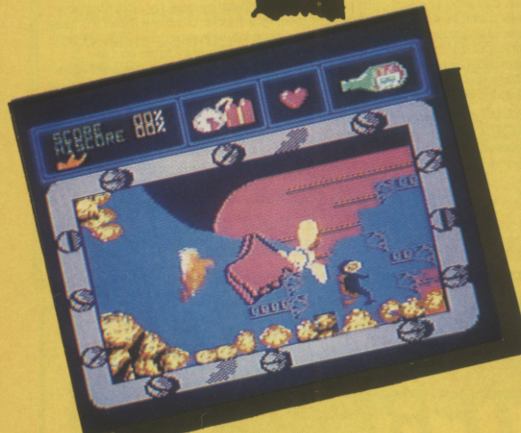


Murder on the Mississpi

ACTIVISION PREVIEW

Having popped up to Activision to see Spin Dizzy (see Games World Mega-star Award), I managed to get a sneak look at a couple of other games that should be released on the 64 very shortly.

Mermaid, the first, is a very odd game in which you play a very fat and ugly mermaid who wants to get her hands on a certain young man. Unfortunately for you (though very fortunately for the man), he is trapped under water, and you cannot reach him.

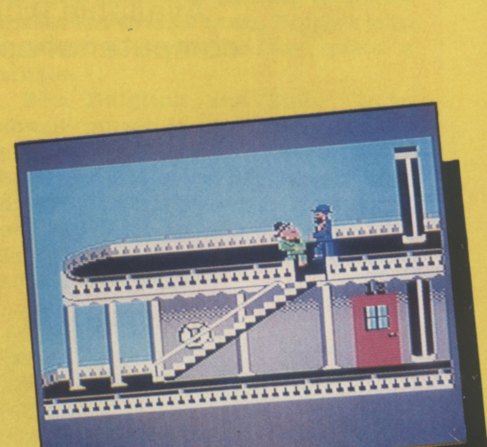
You must, therefore, travel under water searching for a way to rescue your true-love. As you might expect, a busy mermaid needs energy, and in your case you need bottles of stout, which are handily placed randomly at the bottom of the sea.

Graphically, Mermaid is amusing - if not special. Musically too the game is O.K, but nothing really special. What will make this game do well is that it's amusing to the extreme, unless you happen to be a fat mermaid, in which case it's very degrading!

The second game I saw was Murder on the Missisipi. This is another fun game in which you and your annoying parrot-like assistant must complete a lengthy search to find out whodunnit?

The music is by Ed Bogas, of Accolade fame (Hardball etc), and the graphics too are pretty good. These games should be released, Mermaid by Electric Dreams, and Missisipi by Activision, so look out for them. The prices are as yet unannounced, but they won't be more than a tenner.

FKJ



Inside Info

As of immediately, as they say, the lovely Clare is the newly-minted Marketing Manager of Electric Dreams. An extra force is being given to that already successful label by the appointment of the reputedly tough, no-nonsense Ms. Hirsch. Electric Dreams is targeted by Activision to design and develop software in Europe with a style and identity specifically geared to that market.

Clare is no stranger to Activision's organisation. She was in at the start 2 years ago. At that time she had to survive the harrowing task of being responsible for 'shipping, manufacturing - the whole damn thing', helping Activision Supremo Rod Cousens put the company on the map.

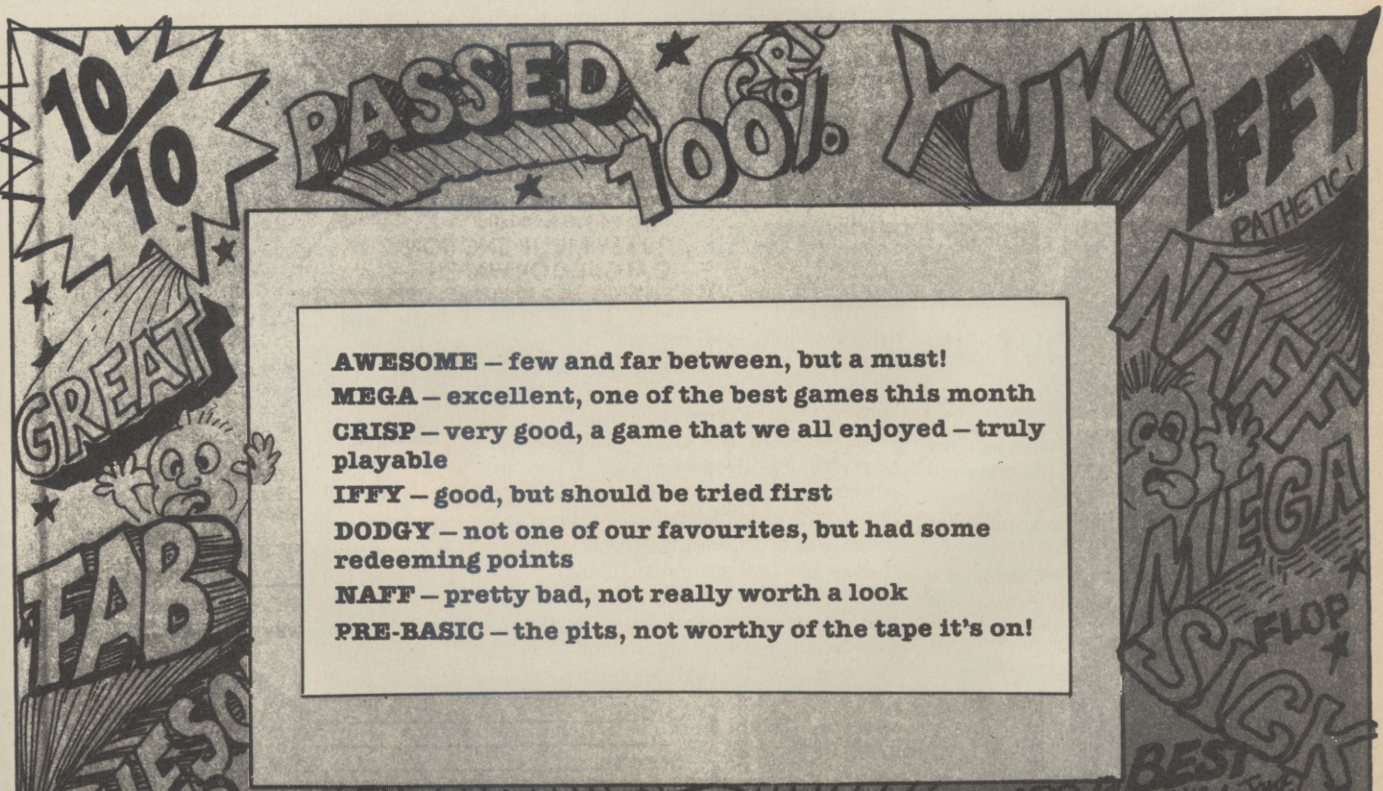
She became Activision's Marketing Services Manager and is now in the Electric Dream's hot seat (or should it be Electric chair?) leading a campaign about to be launched to take the label out from under Activision's largely U.S. shadow and in there among European leaders.

Electric Dream's Mermaid makes a splash! Leading the campaign to put the rather fishy tale of Electric Dream's brand new release 'Mermaid' flipping on every landlubber's monitor is a girl who is making a growing splash herself - Clare Hirsch.

She isn't short in qualifications. A little birdy (another one? Ed.) told us that the deceptively wide-eyed Clare once worked for 'The Photographer Magazine' and was given the highly-coveted award by 'The Publisher' magazine of the 'Sales Person of the Year' in 1983.

Electric Dreams heatedly deny that their 'Mermaid' game is in any way based on the biography of their new Marketing Manager. Myrtle the Mermaid, they point out, is 112 years old, toothless and to quote their scenario, 'has spent half her life soaking in salt water and the other half pulling faces in a sideshow'. We can assure you Electric Dream's new Marketing princess isn't like that at all!

But then the mermaid - the computer one - does have her pluses too. 'Her heart swells and beats with a ferocity unequalled since the homecoming of the troops when she wooed the gallant lads with a belly dance she learned from a squid'. Wow! Electric Dreams' Mermaids look like getting shoals and shoals of fans. You can bet your sea-weedy snorkel on that!



AWESOME – few and far between, but a must!

MEGA – excellent, one of the best games this month

CRISP – very good, a game that we all enjoyed – truly playable

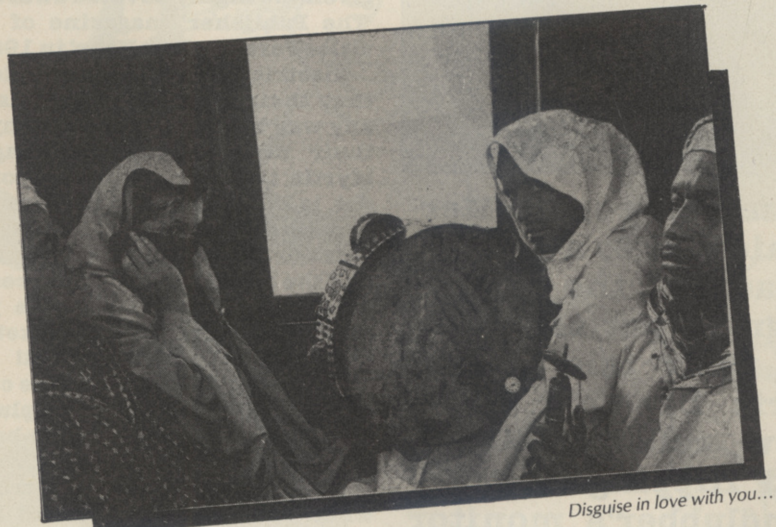
IFFY – good, but should be tried first

DODGY – not one of our favourites, but had some redeeming points

NAFF – pretty bad, not really worth a look

PRE-BASIC – the pits, not worthy of the tape it's on!

MOVIE SCENE



Disguise in love with you…

THE JEWEL OF THE NILE (PG)

After the hugely popular "Romancing The Stone" comes the sequel, charting the further adventures of the squabbling duo, Jack and Joan. It's old fashioned melodrama at its best. The heroine's not *quite* tied screaming to the railway tracks with an engine bearing down upon her, but it wouldn't be out of place as just about every other piece of available hardware is thrown at her. It's the kind of film where the baddies wear black, the goodies wear white and the camels wear ghettoblasters.

Of the fifty ways to leave her lover, Joan the romantic novelist opts for being swept off her feet by a romantic Arab who's tall dark, handsome … and rich. And what girl would say 'no' to offers of fame, fortune and the kind of exclusive "Time" would scratch your eyes out for?

But this potentate is far from genuine, having deprived his people of their 'Jewel', the symbol of their faith, for his own ruthless, warmongering purposes. Enter hero stage left in hot pursuit to save the day, rescue the Jewel and make sure that the ending is the obligatory happy one.

Providing strong comic support are Danny DeVito (of "Taxi") and Avner Eisenberg as the delightfully dotty holy man. "The Jewel Of The Nile" is a lighthearted, glossy romp and just goes to show that they *do* make films like that anymore. **SG**

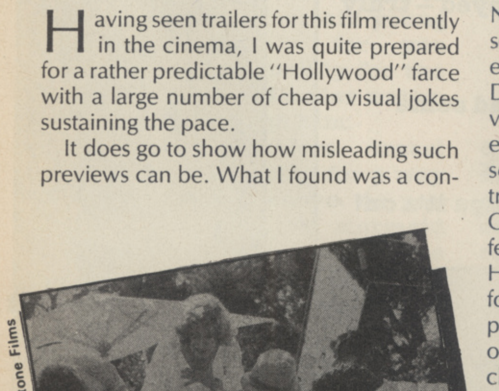
DOWN AND OUT IN BEVERLEY HILLS

Having seen trailers for this film recently in the cinema, I was quite prepared for a rather predictable "Hollywood" farce with a large number of cheap visual jokes sustaining the pace.

It does go to show how misleading such previews can be. What I found was a consistently funny and entertaining film with especially good performances from the leading actors. It is a lightweight comedy starring Richard Dreyfuss, Bette Midler and Nick Nolte as a 'Down and Out' who, by a series of misadventures comes into the extremely nouveau riche lifestyle of Dreyfuss and Midler. We are treated to a visual feast of Beverley Hills most laughable excesses including anorexic daughter, gay son and dog psychiatrist. We follow the transformation of Nolte from 'Down and Out' to god-like figure adored for many different reasons by everyone in the family. However the greatest laurels must be saved for Matisse the dog, as played by Mike. His performance is superb and reinforces the old adage about working with animals and children, they always steal the show.

All in all, a very witty and fast paced film which is never in danger of taking itself seiously.

Barnaby Jago



©MCMLXXXVI Touchstone Films

Kissing with confidence

FRIGHT NIGHT (18)

If you thought your new next door neighbour was a vampire, what on earth would YOU do?? Fright Night is the latest in a very long line of vampire movies, which attempts - and in many ways achieves - combining realistic effects with dry humour to stir the audience.

Charley Brewster, is a sweet, Mustang driving, all American kid who, whilst looking out of his bedroom window, notices some untoward goings on next door. This, combined with the suspicious deaths of some young ladies, leads Charley to wonder about his neighbour.

Unfortunately Jerry Dandridge, said neighbour, is very good looking, and Charleys mum finds him irresistable! As you would expect, Mr Dandridge is a vampire and, when Charley calls in the Police, they laugh in his face (well they would, wouldn't they!). In a desperate attempt to 'save the world' Charley, together with his girlfriend and a schoolfriend (affectionately known as EVIL), goes to visit Peter Vincent - Vampire Killer!!! (excellently played by Roddy McDowall).

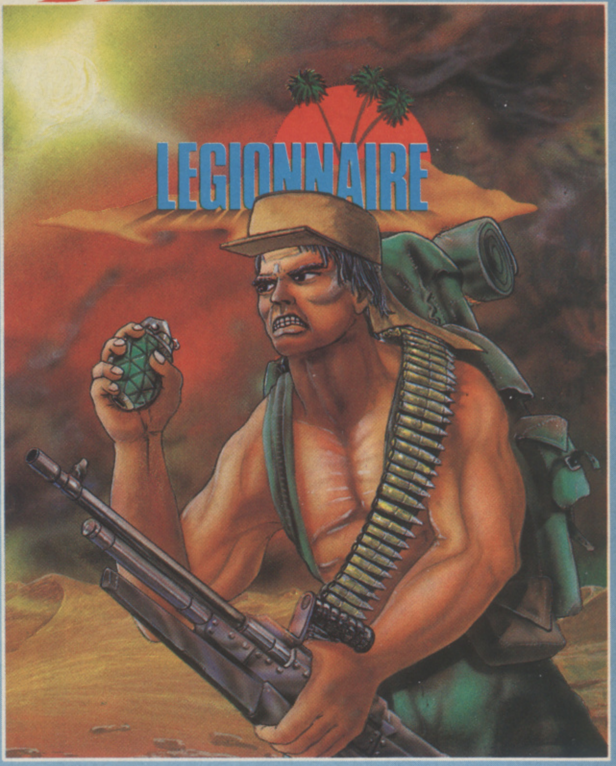
"What do you mean you don't love me anymore?!!"

Together these four (soon to be only two) fight desperately to kill the vampire (stakes through the heart, crosses, you name it!), in time to save Charley's vampired girlfriend.

The special effects, created by the same company that were used for Ghostbusters, are superb - particularly one wolf to man transformation.

Overall Fright Night is a very good vampire film. If you enjoy being scared and relish a little gore, then it could be you cup of tea.

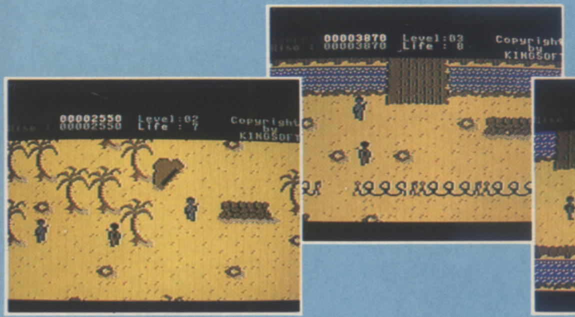
C16/PLUS 4


LEGIONNAIRE

LEGIONNAIRE

Your mission is to take vital messages to the garrison headquarters. As you travel through the scrolling landscapes, you will be under constant fire from the tribesmen bent on reaching the fort. You will have to use your machine gun with great skill to get past them. There are seven separate areas of scrolling landscapes before the fort can be reached and each area requires increasing skill.

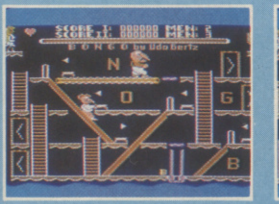
C16/PLUS 4 £5.95

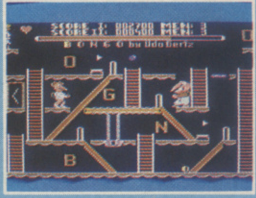

00003870 Level:03 Life : 8 Copyright by KINGSOFT
00002550 Level:02 Life : 7 Copyright by KINGSOFT
00001210 Level:01 Life : 6 Copyright by KINGSOFT

BONGO CONSTRUCTION SET

Bongo Construction Set is a hilarious family game. Bongo is trying to reach the princess, hotly pursued by monsters. He uses ladders, slides, transporters, lifts and trampolines to elude his pursuers but they seem to know his moves before he makes them. There are six stages with five skill levels. You can design your own stages using the joystick and save them on cassette or disk to play later.

C16/PLUS 4 £5.95

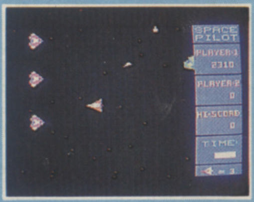

BONGO by Udo Gertz


BONGO by Udo Gertz

SPACE PILOT

Space Pilot, the legendery hero, is under constant attack by alien ships with one aim - the destruction of his craft. The alien craft attack singly or in battle formation. Equipped with heat seeking missiles, their attack is deadly as well as relentless. Space Pilot with full 360 degrees scrolling and four stages, demanding ever increasing skills retains all aspects of a smash hit on CBM 64.

C16/PLUS 4 £5.95


SPACE PILOT
PLAYER-1
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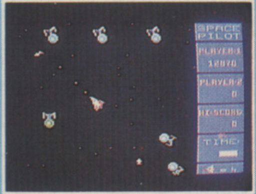
PLAYER-2
0
HI-SCORE
0
TIME

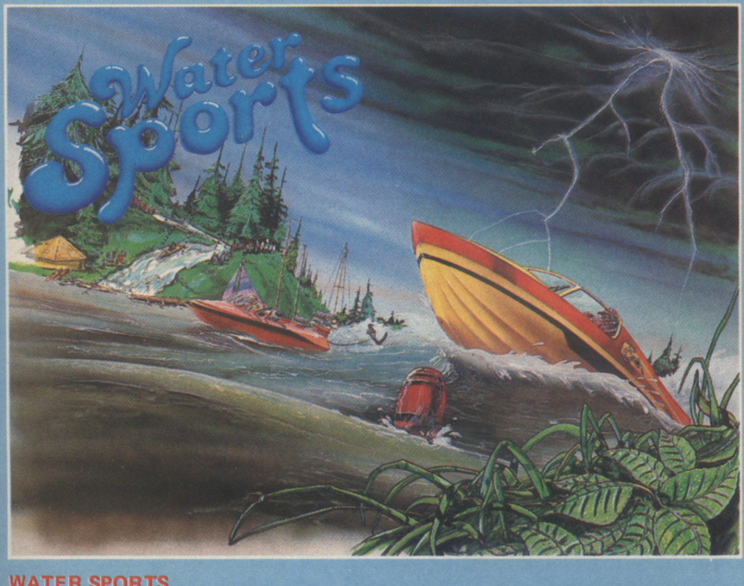

SPACE PILOT
PLAYER-1
12070
PLAYER-2
0
HI-SCORE
0
TIME

THAI BOXING

A unique combination of the noble art of Boxing and skills of Martial arts. Three stages of increasing skill.

16/PLUS 4 £5.95

FORTHCOMING ANCO RELEASES


Water Sports

CHAMPIONSHIP TENNIS

A Tennis Simulation quite capable of creating the drama of the Centre Court. Available June.

C16/PLUS 4 £5.95

MICRO TEXT

Ideal for home user. Facilities include Centring and full Left and Right justification.

£7.95 (Cass). £10.95 (Disc).

MICRO BASE

An easy to use data base with full sort facilities. Ideal for keeping track of records or stamp collection. Club secretaries will find it very handy for storing names and addresses of members. Designed to print self-adhesive labels. Selected names and addresses can be selected for printing.

£7.95 (cass). £10.95 (Disc).

WATER SPORTS

Water Skiing and Shooting the Rapids. C16/PLUS 4 £6.95

WATER SPORTS PLUS

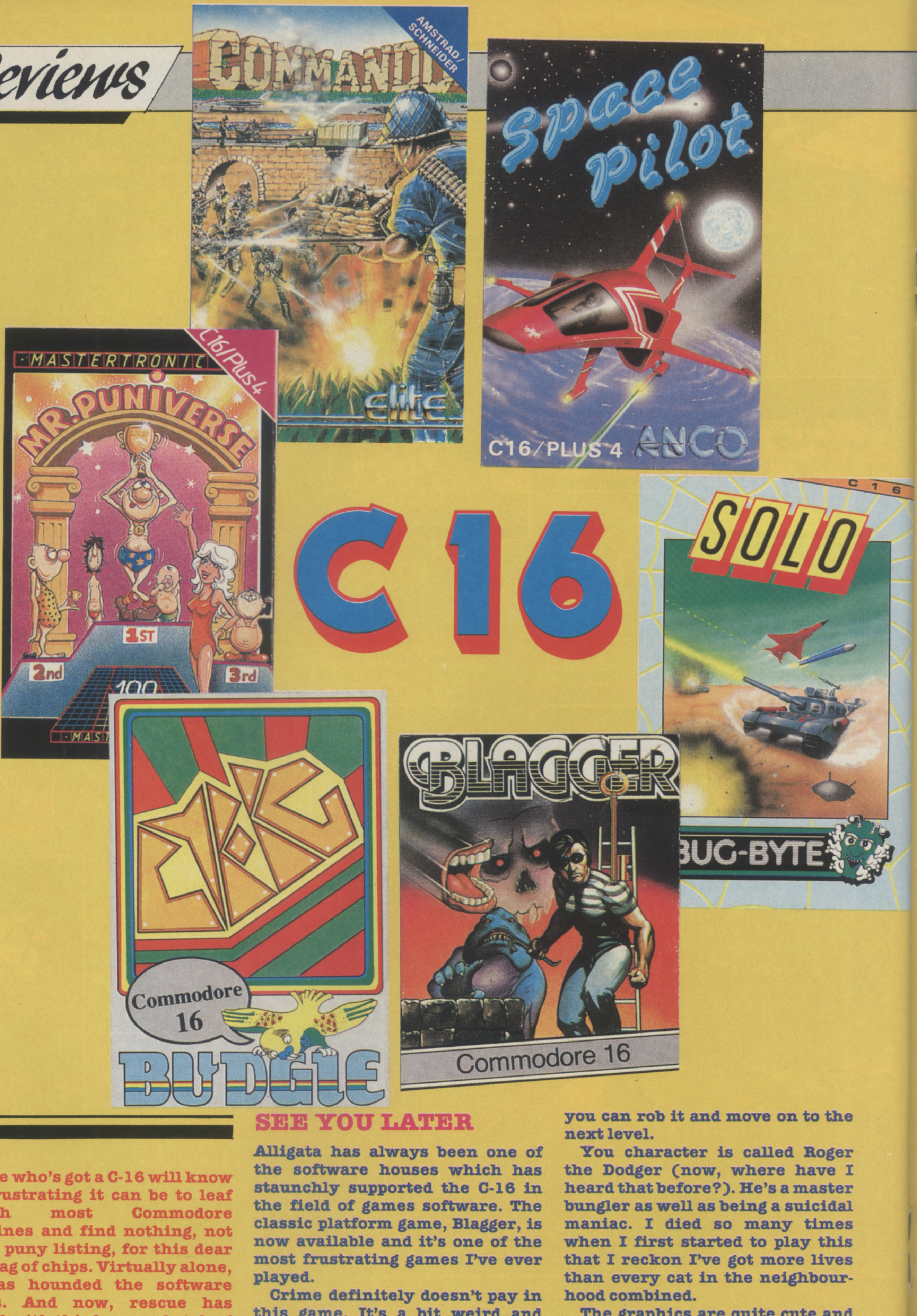
Enhanced version for PLUS 4 owners or C16 with 16K expansion includes an extra event, Power Boat Racing. £7.95 PLUS 4/C16+16K.

C16 and PLUS 4 REFERENCE BOOK

The book has been specially written for ANCO' It is a comprehensive guide for a beginner and a professional programmer. June. £7.95

ANCO

ANCO SOFTWARE, 4 WEST GATE HOUSE, SPITAL STREET, DARTFORD, KENT. DA1 2EH.
Telephone: 0322 92513/92518.
Mail Order: Payment by Cheque, P.O., Visa or Access. 24 Hour Credit Card Service: 0322 522631.


COMMANDO
AMSTRAD/ SCHNEIDER
elite
Space Pilot
C16/PLUS 4
ANCO
MASTERTRONIC
C16/Plus4
MR. PUNIVERSE
1ST
2nd
3rd
C 16
C 16
SOLO
BUG-BYTE
Commodore 16
BUDGIE
BLAGGER
Commodore 16

Anyone who's got a C-16 will know how frustrating it can be to leaf through most Commodore magazines and find nothing, not even a puny listing, for this dear little bag of chips. Virtually alone, CCI has hounded the software houses. And now, rescue has arrived with this bumper batch of games reviews so that you know the best buys to while away those long, hot summer evenings.

SEE YOU LATER

Alligata has always been one of the software houses which has staunchly supported the C-16 in the field of games software. The classic platform game, Blagger, is now available and it's one of the most frustrating games I've ever played.

Crime definitely doesn't pay in this game. It's a bit weird and involves quite a lot of forethought to get to where you want to go.

The basic idea is that you move around each screen and try to pick up all the keys which are scattered about. You then have to make your way to the safe so that you can rob it and move on to the next level.

You character is called Roger the Dodger (now, where have I heard that before?). He's a master bungler as well as being a suicidal maniac. I died so many times when I first started to play this that I reckon I've got more lives than every cat in the neighbourhood combined.

The graphics are quite cute and there is a wide variety of platforms, the worst ones being those that crumble as soon as you stand on them, so beware.

If you've got plenty of time and perseverance then you'll probably get quite addicted to this one.

KILL, KILL, KILL

Cyborg is from the Budgie range of Budget software and it's a really merciless shoot 'em up game.

The idea is to kill as many aliens as possible and stay alive as long as possible and that's basically it.

There are problems. The first couple of games I tried, I died immediately because I had no idea that the onslaught was going to be quite so unrelenting. As soon as the first screen apears you must nip out the way otherwise the aliens materialise on top of you that's that.

There is a humane excuse to all this since you're supposed to be rescuing the Cyborgs which are floating aimlessly around the screen.

It's a pretty fast and furious game and really gets the adrenalin going. To be honest I couldn't stop playing it because I was determined to stay alive a bit longer every time and skill does actually come with practice in this one.

The graphics are fairly elementary and you can only move horizontally and vertically, no diagonals. You have an unlimited amount of ammunition available and I found that the best tactic was to keep firing all the time especially since you don't seem to able to harm the Cyborgs by doing this.

If you like killing things and don't want to have to use you brain then you'll probably love this one. Don't buy it if you're not into mindless violence.

UNIVERSAL APPEAL

Mastertronic's Mr Puniverse was definitely my favourite in the batch of games which I looked at. As the name implies, it is supposed to have a connection with the Noel Edmonds Late, Late Breakfast Show, however I haven't yet worked out what this is.

This doesn't detract from the enjoyment at all. One of the best things about this game is that you get loads of lives, and when you die you only get put back to the beginning of the screen you're currently negotiating. This means that you can have a good look around and there's quite a lot of variety in the game.

It's a very simple concept. There are screens full of hazards which you must avoid. Lots of tunnels, moving pistons, bumpy floors and glowing crystals all serve to make things more difficult. The graphics are very nice and there's a lot of variety. I really enjoyed this especially since I was able to get quite far into the game.

SPACE INVADERS REVISITED

Space Pilot from Anco must be one of the least exciting space invaders games I've ever seen. It is so boring, I think you could fall asleep in front of the keyboard and still not die.

But seriously, folks. You control this amazingly sluggish craft and get attacked by what looks like a whole fleet of Enterprises. They're really easy to blow up and they have guided missiles which are too cowardly to come near you.

Once you've despatched this little lot of hostile craft single handed, then another fleet arrives - they're a different shape, and a good thing too as otherwise you wouldn't know that you'd got to the next level.

You can twirl your spaceship through 360 degrees but it is quite difficult to control. However once you've got the hang of it, the game is mind-bendingly easy and thence becomes equally tedious. It's about as exciting as a plate of wet spaghetti.

COMMANDO C16

Elite must be congratulated for this game, they are the first software house to release a number one hit for the C16 within one month of the 64's release. In fact, the C16 version of Commando is likely to be one of their biggest selling versions!

If you are an arcade fan who enjoyed playing CapCom's original game then this version will definitely appeal to you. Understandably, the graphics and sounds are not as good as the 64 version, but nevertheless, Elite have managed to maintain the extreme playability that made the game such a success.

Using vertical scrolling methods, to win at Commando you must travel upwards, despatching with various enemies as you travel. You must also contend with machine gun posts. As far as weapons go you have an unlimited machine gun, and a few grenades, that can be supplemented by picking more up as you go along.

Overall this game is a must for any C16 owning arcade fan, it is exciting and the conversion is unexpectedly playable. I hope this means Elite will convert many more of their titles to the C16, this one's definitely a winner!

SKY HIGH

Bandits at Zero, from the MAD range of games, is another goodie. You have been given the lonely task of being the hero who will save his country from destruction by destroying the aircraft carrier which is the source of devastating ariel assaults.

You start off flying around looking for the enemy and getting involved in complicated ariel refuelling antics. This is quite a regular occurence because there's three days flying ahead of you before you reach the aircraft carrier.

When you start off you should be able to get a fair number of the enemy planes since you can fly faster and they're not expecting you. As the days go by, things begin to hot up a bit and on the last day when you arrive at the fleet you have to combat the shells which go whizzing past from the battleships as well as numerous planes still trying to bring you down in flames.

Graphically, it's pretty sophisticated and shows what can be done with the C-16's memory as long as care is taken.

Buy it, you'll definitely enjoy it.

SOLO

Still up in the air, we come to the last game in this batch - Solo from Bug-Byte. This one takes you outside the atmosphere in a battle against aliens.

You control the fighter Solo and your task is to massacre the hordes of aliens who fling themselves at you.

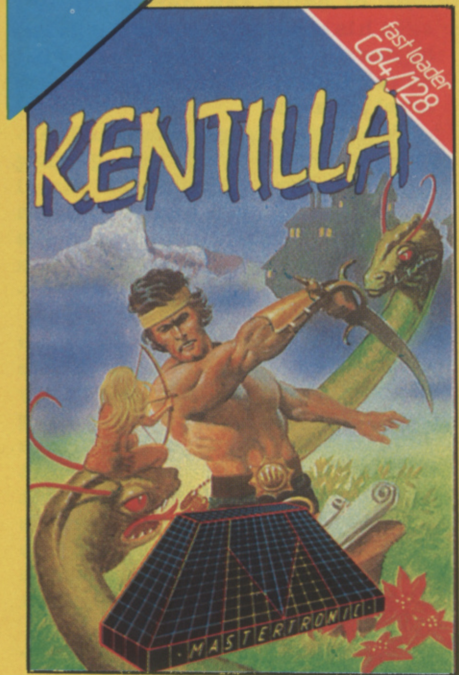
At the start of the game you're sitting at the bottom of the screen, but don't stay there too long because the action is thick and fast and the second wave of enemies arrives before you've had a chance to dispense with the first lot.

There are supposedly 10 levels but I should think you'd have to be a super hero to get through them all. There's no doubt about it, this game is merely an excercise for your trigger finger and reflexes, the nice thing about it is that it doesn't pretend to be anything else.

The graphics are pretty basic and variety is not one of the game's attributes. However, if what you want to do is spend an hour or so zapping away happily then you're sure to enjoy this.

CCI Rating

IFFY



KENTILLA

I've always been a firm believer that you only get what you pay for; and therefore I have always viewed Mastertronic's £1.99 games with a little scepticism. When the MAD range came out I was very impressed, both by price and quality - and this continues with Kentilla.

Although not a MAD game, Kentilla is enjoyable and, at £1.99, within everybody's price range. Its format is similar to almost every graphical adventure you have ever played, except that the graphics are only displayed on a small window at the top of the screen.

What is novel however, is the continual interrupt driven music by, (suprise, suprise!!), Rob Hubbard. This adds a certain spice that makes this game much easier to remain interested in - if only just to hear the end of the amazingly long tune!

Kentilla will disappoint a few dedicated adventurers, yet most people who generally prefer arcade games may well find that this game suits them 'down to the ground'. The vocabulary is good, if not exceptional, and the game is very playable.

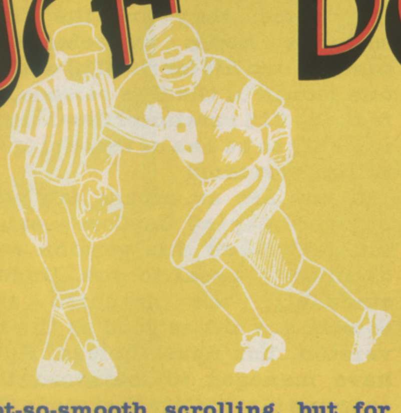
Overall, if this game had been I would have said how disappointing it was, but for under two quid you just can't lose!

Graphics: ★★
Sound: ★★★★
Playability ★★★
Rating: IFFY
Contact: Mastertronic, 8-10 Paul Street, London EC2. Tel: 01-377 6880

CCI Rating

CRISP

TOUCH DOWN



TOUCHDOWN FOOTBALL.

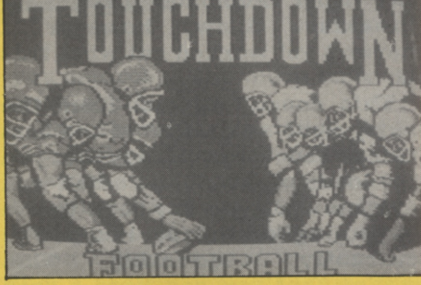
The UK now takes American Football VERY seriously. Not only are there over 100 teams playing in various leagues, but two of America's most famous teams, The Dallas Cowboys and the Chicago Bears, have completely sold out Wembley Stadium. Something many first division football teams couldn't manage!

To capitalise on this exposure both Ocean and now Ariolasoft have released American Football games. Ocean's game (see last month's CCI) was good, but it lacked any real playability. Ariolasoft, by importing an American game, have used a different approach - and the game is far better for it!

Graphically, Touchdown really is nothing special, if anything it's a little reminiscent of very early 64 games, with chunky men and not-so-smooth scrolling, but for real fans of American, the game is GREAT, but you'll have to know the terms...

At the start you must select the game play, then snap the ball. You control the Quarterback until he releases the ball, then you control whichever receiver you have nominated. In defense, you must attempt to stop the opposition from gaining a first down. All the included plays, such as Blitzs, Streaks and Side lines are executed accurately,; and it's a real joy to see one of your receivers sprinting in for a TD! (All right, Touchdown!)

If you're a fan of American Football, and you can put up with the not very good graphics and sound, then this game is definately for you.



Price: £9.95
Graphics: ★★
Sound: ★★★
Playability: ★★★★
CCI Rating: CRISP
Contact: Ariolasoft, 68 Longacre, Covent Garden, London WC2. Tel: 01-836 3411.

GREAT... AMAZING... SENSATIONAL.. COMPETITIONS IN CCI!!!

WIN ACTIVISION'S SPIN DIZZY!

All you have to do is name the most famous Arcade predecesser game in the Spin Dizzy style. First 30 correct entries out of the Competition Sack will win Activision's great new Spin Dizzy game. Answer on a postcard, please to CCI Spin Dizzy Competition C/o CCI.

WIN A COMMODORE MODEM AND A FREE SUBSCRIPTION TO COMPUNET!

All you have to do is name the year Compunet started and (in not more than 15 words) tell us what you will use the free subscription to Compunet for. Answers on a postcard, please, to CCI July Compunet Competition C/o CCI.

WIN THE EXTRAORDINARY BLINKER 64!

This is your chance to win the extraordinary BLINKER 64 worth £29.90! It will help you write programs the way the professionals do. All you have to do is write a simple program – any kind you want – in 10 lines or less. The best will win a free copy of BLINKER 64. Entries to CCI BLINKER 64 Competition C/o CCI.

WIN THE SWIFT PROFESSIONAL SERIES PACKAGE!

All you have to do is name the Commodore computer and how many coloumn monitor swift runs on and how many cells it can calculate (all answers can be found in the review the next issue of CCI). First correct entry out of the Comp Sack will win an Audiogenic Swift package. Answers on a postcard, please, to CCI Swift Competition, C/o CCI. Closing date: August 15th

WIN SYSTEM 3'S SPECTACULAR INTERNATIONAL KARATE GAME!

All you have to do is name the first official Karate belts and tell us what "Karate" means and name three previous System 3 releases. The first 30 correct entries out of the Comp Sack will win a copy of System 3's new release, International Karate. Answers on a postcard, please, to CCI International Karate Competition C/o CCI.

WIN US GOLD'S WORLD CUP FOOTBALL!

All you have to do is name the only two countries to win the World Cup three times; name all the teams in Group 7 for this year's Cup and name who won the first World Cup and the year. The first 30 correct entries out of the Comp Sack will win a copy of US Gold's brand new World Cup Football game. Answers on a postcard, please, to CCI World Cup Football Competition C/o CCI.

WIN PLUS/4 — C16 GAMES! MAGNIFICENT 7'S INDOOR SOCCER!

All you have to do is name the winners of the last three World Cups and the countries where they were played.

First ten correct entries out of the Comp Sack will win a copy of Magnificent 7's brand new Indoor Soccer. Answers on a postcard, please, to CCI Indoor Soccer Game Competition C/o CCI.

WIN A SENSATIONAL JOYBALL CONTROL!

All you have to do is name which Arcade game had a joyball style control built into its panel. First correct entry out of the Comp Sack will receive Euromax's great new Joyball. Entries, on a postcard, please, to CCI Joyball July Competition C/o CCI.

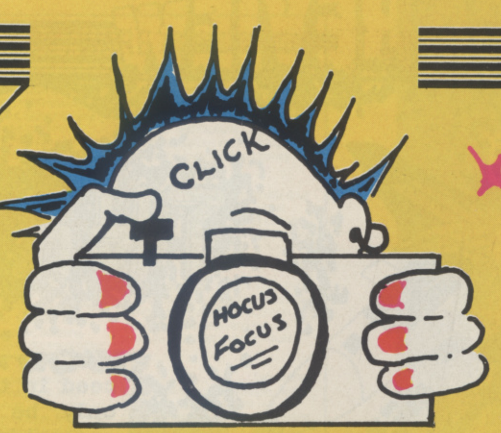
The address for all competition entries is Commodore computing international magzine,
Finsbury Business Centre, 40 Bowling Green Lane, London EC1R ONE

The Editor's decision is final and no correspondence will be entered into in regard to the result.

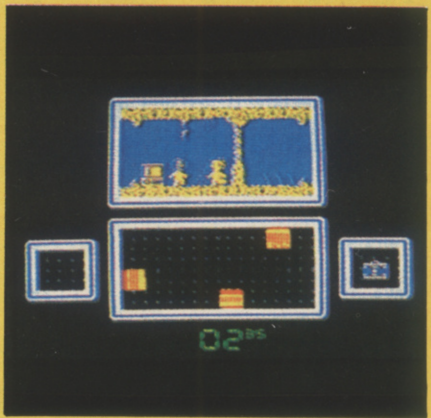
Closing date for competitions: 15th July 1986

CCI Rating

DODGY



HOCUS FOCUS



HOCUS FOCUS

How many punks do you know called Jeremy? I'd guess that the answer was a unanimous 'NONE!'. Well that's a bad start the Quicksilva's latest game, Hocus Focus. You play said punk, who happens to be a photographer.

Your assignment is to go to a mad professor's lab, under Hyde Park, and take lots of photos of his latest inventions. This may sound incredibly easy (no!), but to hinder you are a wide variety of mutants who, if you touch them, expose your film - and you must then return to the surface to get some more film. (Where do they FIND these ideas?)

Working for the Daily Shocker is the kind of job that gets you a bit of abuse, so Jeremy carries a sword with him at all times. One thing everyone forgot to tell our hero was that the area is also contaminated by radiation!

Hocus Focus' screen is split into four divisions, with the top area showing your movements, the bottom showing how much of the picture you have amassed, and the other two showing various options. There is also a gauge to show how radiated you are!

Overall this is an OK game, but definately not special. A case of try BEFORE you buy!

Price: £8.95
Graphics: **
Sound: ***
Playability: ***
CCI Rating: DODGY
Contact: Quicksilva Ltd, Liberty House, 222 Regent Street, London W1R 7DB. Tel: 01-439 0666.

CCI Rating

MEGA

STARQUAKE

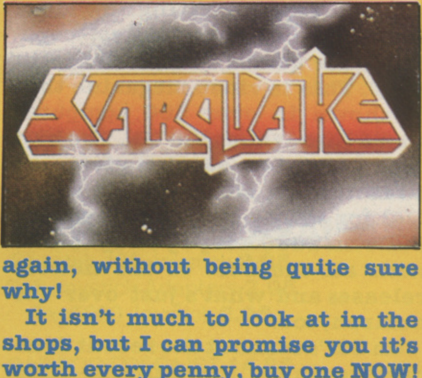
I've long been a fan of good arcade adventures, but of late they seem to have been getting slower and slower, and more and more adventure, when they should be more arcade. I was therefore delighted when Starquake arrived for the 64.

Thoroughly raved about on the Speccy it seems to have lost nothing in the conversion, and is if anything, more playable, with an excellent all-round feel.

You play a cute little character, aptly names BLOB. In BLOB you have a close friend whom you must guide around a planet until you have gained enough sections to rebuild the core of the planet - OK?

Converted for the 64 by Nick Strange (no relation), it is one of those games which you think you will play for a couple of minutes - only to find yourself hooked for hours! As far as recent arcade/adventures go, Starquake is by far the best; great sound, above average animation and amazingly addictive.

Much to my surprise, Bubble Bus didn't release just another 3-D Ultimate clone, they have created something much better - one of those games that you will find yourself coming back to again and again, without being quite sure why!



It isn't much to look at in the shops, but I can promise you it's worth every penny, buy one NOW!

Price: £8.95
Graphics: ***
Sound: ****
Playability: *****
CCI Rating: MEGA
Contact: Bubble Bus Software, 87 High Street, Tonbridge, Kent TN9 1RX. Tel:0732-355962.

MEGA REVIEW

CCI Rating

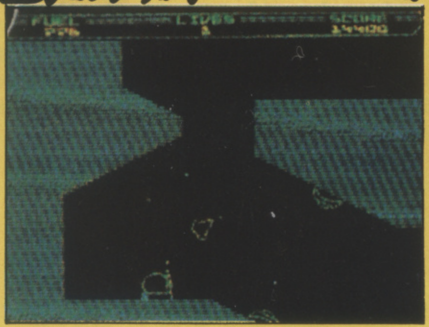
MEGA

THRUST

Firebird are a very odd company, sometimes they release games priced at ten pounds that are worth two, sometimes they release two pound games that are worth an awful lot more. Thrust fits the latter category.

Priced in their budget range, **THRUST MUST REPRESENT THE BARGAIN OF THE MONTH**, and if you miss it - you'll regret it! Two things unrelated to the actual game also add interest; the loading screen is designed by Bob Stevenson, a Compuneter, and is totally brilliant; and the music is one of Rob Hubbard's best yet; long, atmospheric and perfectly suited to the game.

Thrust is a game obviously based on one of the all-time arcade classics, Asteroids, only with a more varied and difficult theme. To succeed in this game you must not only be able to control your spaceship, but cope with having a heavy and swinging weight attatched to you.



Graphically, Thrust is pretty basic, no filled in colours, but in many ways this adds to the game, its simplicity is one of the best features.

Recommending this game is really easy, **IT IS WITHOUT DOUBT THE BEST BUDGET RANGE GAME I HAVE SEEN**, miss it if you dare (or if you want to miss out on a great game!)

Price: £1.99
Graphics: ***
Sound: *****
Playability: ****
CCI Rating: MEGA
Contact: Firebird, Wellington House, Upper St Martins Lane, London WC1.

AWESOME?
IFFY?

Check for Yourself!

BULLETIN 1·0·0·0

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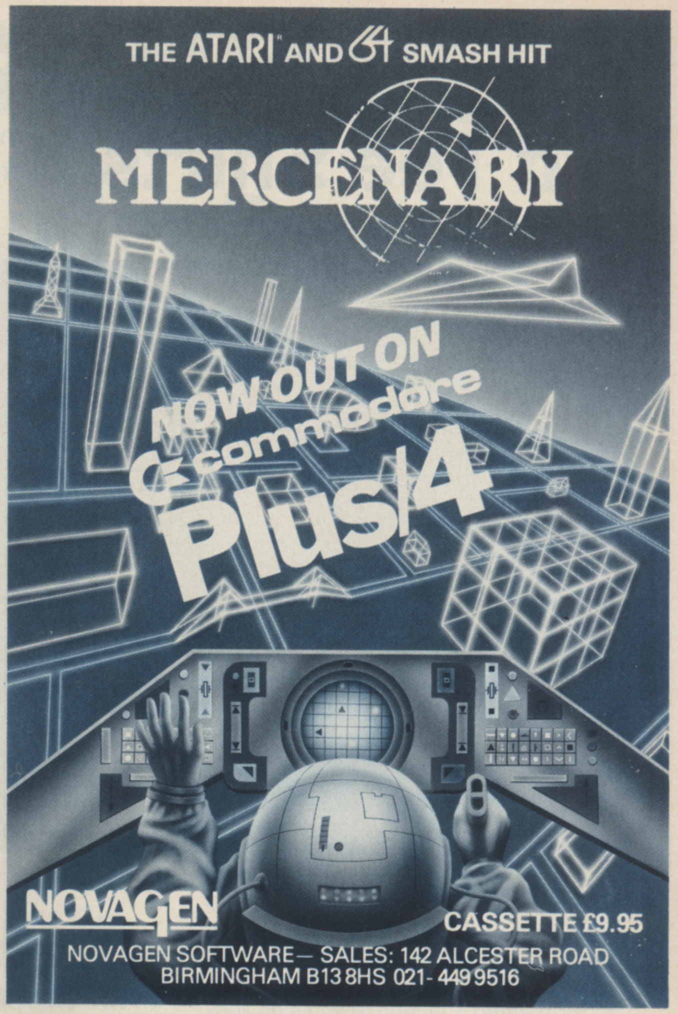
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FIGHTING WORDS

The Jeff Minter Page

Well here I am again, seated at the Apple, Knopfler's guitar doing good things to my head and time to write another column. CCI this time; the attrition of the Commodore mags goes on, part of the general collapse of the boom-industry of a couple of years back, I guess... pity; I remember the good old days of '83 and '84, when I was doing stuff like Laser Zone and Revenge, when America was still buying arcade games and you could have a bit of fun writing blasters for the Vic. Everything these days has to be so damn complex, I sometimes think that the loss of the good, simple arcade blast is a Really Bad Thing. Today, you can't sell a game unless it is absolutely state-of-the-art, has Ultimatesque pseudo-3D and is horrendously difficult to learn, and takes about six hours to play. More thought goes into designing the tunes, writing the fastest Ultimate 3D routines, and filling up every byte of memory, than into the actual game design... consequently we tend to get a game, freak out over the graphix or tunes or 3D or whatever, and then just put up with mediocre gameplay.

Designing for the old 3.5k Vic didn't leave any room for fancy tunes or amazing graphics, so you had to concentrate on playability and clever game mechanics, which led to some simple but horrendously addictive stuff, the like of which you rarely get now... I'm not saying that we should all revert to low-memory machines and play three-year-old games, I just think that we shouldn't lose touch with simple arcade ideas and get lost in a morass of endless arcade-adventures. Less Knight Lore/Alien 8/Cylu/Chimera etc. etc. please, more Defender/Robotron/Star Raider/Stargate type of stuff. Mind you, I have been very impressed by one Ulimate-style game that completely outclasses any of the Ultimate originals... entitled **Crafton & Xunk,** I originally read about it when I was on holiday in France, and have since had the chance to play it here. It's only on Amstrad at the moment, but hopefully PSS (who are licensing it here in the UK) will convert to other formats. The game's appeal lies in the fact that just about everything in the beautifully-drawn 3-D rooms can be pushed, pulled, jumped on, stacked or whatever in order to achieve your objectve. The game is fast and rich in humour, it doesn't take itself too seriously, which is an attitude I find refreshing. Hope it makes it over to Commodore, or even Amiga format...

Ah yes, the Amiga. I've been getting more stuff for this machine, it's gradually coming along in dribs and drabs; I've seen other stuff in demo that I've not yet managed to get for myself yet. EA are the most prolific, I have Archon, One-on-One and Seven Cities of Gold at present, and I've seen ArcticFox. Archon is basically the same as the Commodore game, but the sonix are nicely enhanced and in stereo; likewise One-on-One, a game that I've never really got into on the 64 but which is worth seeing on the Amiga on account of the impressive digitised crowd effects; you can quite clearly hear vendors in the crowd selling hot-dogs, beer and ice-cold Coke. ArcticFox looks like it's been written by the same people who did something called Stellar-7 on the '64 a while back; the same types of opponent are present, rendered in solid-3D; you sit in your tank just like in Battlezone, blasting the opponents, but the strategy is a little more involved, you have a map and a variety of terrain to contend with. From the brief look I had at the game, it looks very good, with some very nice sonics; the graphics are a little slow, but still pretty amazing.

There are not many real stars in the computer world, but among them undoubtably glitters Jeff Minter, creator of innumerable smash-hit games such as Batalyx and exciting new ideas like Colourspace. A writer of controversial columns for Commodore Horizons, CCI is sure that you will be delighted to be able to read him in the new merged CCI – Horizons magazine. We've given Jeff the freedom to say what he wants (libel laws permitting!), so look out for his hard-hitting pages in future issues of CCI. You may not always agree with what he says, but he's certainly worth listening to. CCI won't always agree with what he says either, but we promise to print it anyway!

Another fun program for the Amiga (and hopefully for the ST soon) is a totally text-based piece of weirdness called Racter. This is a sort of 'electronic entity' inhabiting the machine; you get to ask it about life, the Universe and anything else you can think of; in the manner of the old 'Eliza' psychoanalysis programs of old, Racter picks up on key words and phrases in your input and responds accordingly. The effect is TOTALLY weird; playing the game is a real head trip... the responses are syntactically correct, scattered with references to philosophers, mathematicians and lots of hoopy people, and completely surrealistic. Racter kept asking me if I was afraid of mink... If you want to 'do your shed in' completely, try Racter. (we already have, Jeff, have you read CCI recently? Ed)

That is, of course, assuming that you get an Amiga in the first place. I still don't know just where Commodore are at with their handling of the Amiga. The way I see it, Commodore have to get Amiga out there at under £1000 including colour monitor, or they've had it. Amiga is essentially a home and entertainment machine, despite any claims Commodore make to the contrary; as I've already explained, business people aren't going to impressed by its sound capabilities, or the fact that the blitter can shift screen data blindingly fast; they want to know how fast it can go and how much RAM it's got and how much software's ready, and at the moment, the Atari ST wins on all these counts. Commodore are now making noises about selling Amiga into specialised markets, like graphics-design and music. This could work, but won't be particularly good news for people like us, 'coz the prices will stay pretty high Also, musicians might find the Atari ST more suitable for serious musical use; although the ST's built-in sound capabilities are as nothing compared to Amiga's 4-channel stereo sonix, the Amiga sound generator is not really up to professional standards; the way most musicians will want to use their system is as a controller linked via MIDI to their own instruments; the Atari ST has MIDI ports as standard, and Atari are working on a little sound device called AMIE that will blow you minds if it's ever released...

No, I've been saying it awhile and I'll say it again: Amiga is the perfect home machine, having the potential for better-than-arcade games, a classy music synthesiser, excellent graphics for drawing or Colourspacing, and the capability to do a lot of useful stuff like word-processing (real human-orientated word processing like on the Macintosh). Commodore just gotta get it out there, in quantity, under £1000, and into the mass market.

Or else Uncle Jack'll get there first...

I reckon the Amiga won't be quite sub-£1000 to start with, but I don't think it'll be as expensive as a lot of people have suggested, either. There's just been a big pricecut in America that hopefully will carry over to the UK market. Just this once, Commodore have to get it right – it'd break my heart to see the hoopiest machine of the '80s get nowhere 'coz of misdirected marketing.

POWER CARTRIDGE

Launched at the Commodore Show, and therefore available by the time you read this review, the Power Cartridge is the newest multi purpose cartridge to hit the market. Yet with the Final Cartridge and Robtek's excellent cartridges already available, is there room another cartridge? Judge for yourself.

As you would expect, the Power Cartridge has all the facilities of the Final Cartridge, but in many ways, these routines are far more complete. To look at, the Power Cartridge is very dynamic, coloured bright red, and with a small white button on the back, it can hardly be described as discreet!

Everything about it, from the basic disk routines, to the excellent 'TOTAL BACKUP' facility has a professional feel.

For the BASIC programmer, the Power Cartridge has an excellent Toolkit. This has all the accepted facilities such as finding specific files on cassette.

For the more proficient programmer there is provided a really good machine code monitor. It allows you to disassemble areas of memory, edit them, move them, or search for ASCII or HEX values or digits. Loading is also easier, as you can choose where in memory you wish to load a file, as well as where you want to save it from. As well as these commands there are many others which make mundane tasks a great deal easier.

To complete the Power Cartridge is the main menu. By pressing the button on the back of the cartridge at any time, you immediately jump to a section that allows you to save memory to disk, tape, or to print the screen. Having completed any of these tasks, you can then get back into the program by using the CONTINUE function. This can be used with every game I have tried , and is not just a pirate's tool, as you must have a Power Cartridge to load these programs back in from tape or disk.

HARDCOPY is an especially AUTO line numeration, DELETE line facilities, DUMP - which displays the values of all single variables, and FIND - a text search. As well as these, it also has some more complicated routines such as DOKE, which allows you to poke two bytes simutaneously, thereby saving a great deal of time. It also has a neat MERGE command, which allows you to join different programs together, as if they were modules of code.

As well as the BASIC toolkit, there is a complete set of tape and disk utilities. These include quick formatting and verifying, DLOAD - turbo disk loader, and turbo tape facilities. There is also a neat AUDIO command, which is excellent for good function, as it allows you to create some excellent screen dumps of games or packages which don't have printing facilities, and then continue with the program! HARDCOPY works with a wide variety of printers including Epson and Commodore.

Overall, the Power Cartridge is an excellent product. If you have yet to decide which cartridge you want, and I can assure you that they are becoming essential, then this is possibly the best, yet. If however you already own a competitor, I would think twice before laying out another £50 for this one.

Francis Jago.

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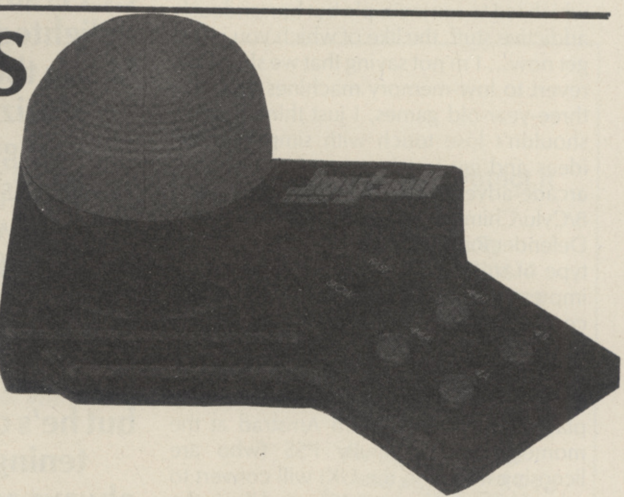

WIZ CARD AND JOYBALL

Last month I reviewed the Joycard, a new and exciting alternative to the more usual form of user input - joystick etc. This month I'm going to talk about two even newer forms, the Wiz Card and the Joyball.

Both of these devices are distributed by Euromax, the company also responsible for the Mice reviewed elsewhere in this issue. I think that is the only thing they have in common!

The Wiz Card is the less unusual of the two devices, and in appearance and design it is similar in some ways to the Joycard. It is, not suprisingly, flat; though unlike the Joycard it is operated not by touch or heat but by good old-fashioned finger power!

Originally designed for use with MSX machines, the Joyball is large, and best used on a flat surface. It operates using microswitches, set up to react to the up-down-left-right signals of the ball. First I tried the Joyball on Electric Dream's newest game; Spin Dizzy. I could no believe how good it was, amazingly positive and easy to use, but more than anything it felt totally natural, as if I had been using it all my life, rather than ten minutes!

Both fast and slow fire options are provided, together with multiple and single fire buttons. For game that require more buttons, there are also two spares. If you can afford the Joyball, buy it, you certainly won't regret it!

Made out of robust plastic, the card measures about 3 inches by one and a half inches. The movement is controlled by a cross situated at the top. There two fire buttons provided, both located at the bottom.

To use, the Wiz card is very nice, positive yet light, although the fire buttons are a bit spongy. For games which require a certain accuracy it is perfect, and at £12.95 it is a viable alternative to normal joysticks.

The Joyball is an entirely different kettle of fish. Priced at £24.95, it is very expensive (in comparison to normal joysticks), but if I were a dedicated games player, I would say that it was definitely money well spent.

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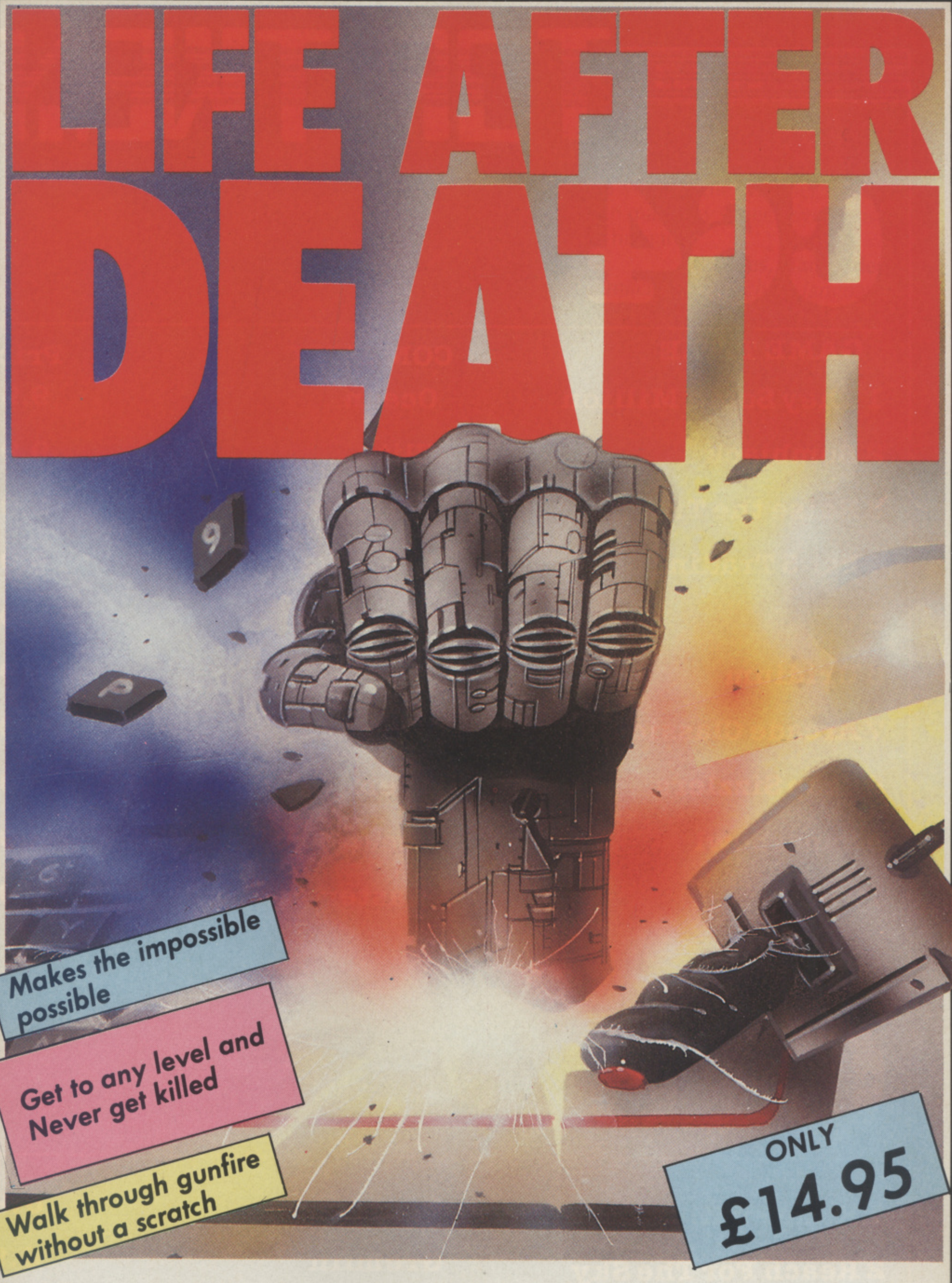
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This month your letters are answered by Rae West. Rae is the author of three large reference books on Commodore computers; the latest is Programming the Commodore 64, following Programming the VIC and Programming the PET/CBM. All are published in the UK by Level Ltd. Rae is also published in the USA by Compute! Books.

Dear Rae,

Can you help me with a programming problem on the C64. I purchased a book called Winning at the Races Using Your Computer'. Unfortunately the programs seem to be intended for the Z80 chip and I'm having problems with certain commands. The main differences are: (1) A$ = INKEY $, (2) PRINT @, (3) IF...THEN...ELSE.

V. Hague, Newcastle on Tyne.

It's true that 6502 and Z80 machines do tend to have different styles of BASIC. A popular book on BASIC interconversion is by David Lien. Some conversions, of course, have to be written around - like IF...THEN...ELSE, where the logic has to be taken into account if BASIC has no ELSE statement.

Dear Rae

'I have a cheap black-and-green monitor with a TV-aerial type socket. I'd like to use this to free up my colour TV, but I can't get it to work with my 64.'

T Phillips, Eastbourne

This shouldn't be too much of a problem. You'll need a cable connecting the monitor to the video signal, and ground, from the 64's audio/video socket. These are pins 2 and 4 (South and South-East looking into the 64) of the AV socket. The same cable will also work with the VIC-20.

Dear Rae,

Can you explain to me why in using the MPS-803 printer we put at the end of the program this line:-

```
For I=1 TO 8 : PRINT # 4 : NEXT K :
CLOSE 4
```

M. El Fitouri, Tripoli.

There seems to be an error in the line as you've type it - the loop should use only I or only K. assuming this is corrected, PRINT # 4 will print 8 carriage returns within its loop - the paper will go up 8 lines. CLOSE 4 closes the file to the printer: almost certainly the printer file was opened with OPEN 4,4.

If you want to know more, can I refer you to the section on printers in my book 'Programming the Commodore 64' (published by Level Computer Books).

Some Plus/4 problems:-

Dear Rae,

I am having a problem in getting communications software to use with my modem which I need in order to access Micronet/Prestel services. I think Commodore should write software for us users of the Plus/4 - we are the neglected ones!

S.A. Thomas, Kensal Rise

Much of Commodore's communication software is written by Y2 computers, of Watford, who will be able to tell you whether such software exists.

Dear Rae,

I have a specialist morse code program on machine language for the C64. Can I convert it to run on my Plus/4?

J. Jones, London

This may be possible, but would take many hours of work. I'd advise against even trying-unless you have plenty of free time.

Dear Rae,

I've found a simple procedure for saving word processor files from the Plus/4 onto tape. After typing into the word processor, take note of the number of rows of text, enter the spreadsheet, press RUN/STOP and reset. You are now in the machine language monitor. Save the block of text from start address C120 and end address from this table: up to 20 lines C730/ 40 lines CD38/ 60 lines D338/ 80 lines D940/ 99 lines DF38.

For example, S "LETTER", 1, C120, D338.

To reenter software type "X" and press return twice. To load a tape file back into the wordprocessor, enter the monitor from the spreadsheet as before, and type (for example) L "LETTER",1

R. Allen, Newark

Right! This takes advantage of the Plus/4's monitor, and its reset switch. (The same sort of thing is possible with the C128, but not the 64).

Dear Rae,

I have a Commodore Plus/4 which I understand has a built in software package. But when I press function key 1, the words "SYS 1525: 3-PLUS-1" do not appear, as the manual says they should. Can you help?

R. Boothroyd, Brighouse

Your machine sounds faulty. I suggest you contact ICPUG (The Independent Commodore Products User Group) who have a Plus/4 going which may be able to find someone in your area.

Dear Rae,

Please could you tell me whether there is any way I can make my speech synthesiser sound more human!

R.Pages, Harpenden.

If you are familiar with machine language, you'll be able to improve on almost any speech synthesiser - to some extent. But don't be too optimistic - the manufactures don't deliberately make their voice synthesisers sound strange!

Broadly there are 2 types of voice synthesisers for the 64: those that use the button SID chip, and those with their own chip. The latter need some sort of cartridge (to hold the chip), but can sound very good indeed if the chip is a good one. Using SID is cheaper but the result tends to be less good - it isn't designed for the purpose. There's scope for altering the programs which use SID. Most games voices use square-wave output to approximate the voice; this method, also using SID, is heavy in its use of memory.

Dear Rae,

I need your help. My boss asked me to complement our existing software with protective measures. We have an 8032 and an 8096. I need to know everything about the user ROM area $9000-$AFFF. Could you supply me with a full disassembly of the above area?

G.R. Charles, Birmingham.

Commodore's old 8032 and 8096 machines have spare sockets corresponding to the area you mention; a disassembly just shows nothing! These slots can be used by fitting a ROM or EPROM holding a suitable program. Typically they are then assessed with a SYS call, such SYS 37000, to activate them. It's certainly possible to use machine-language programs in this area to provide some program protection - for example, by first loading, then decoding and running, an encoded program. I'm a bit sceptical, though, whether at this stage you'd gain much by protecting early Commodore software.

Do you have a computing problem, or advice to offer other readers? Write to us at:

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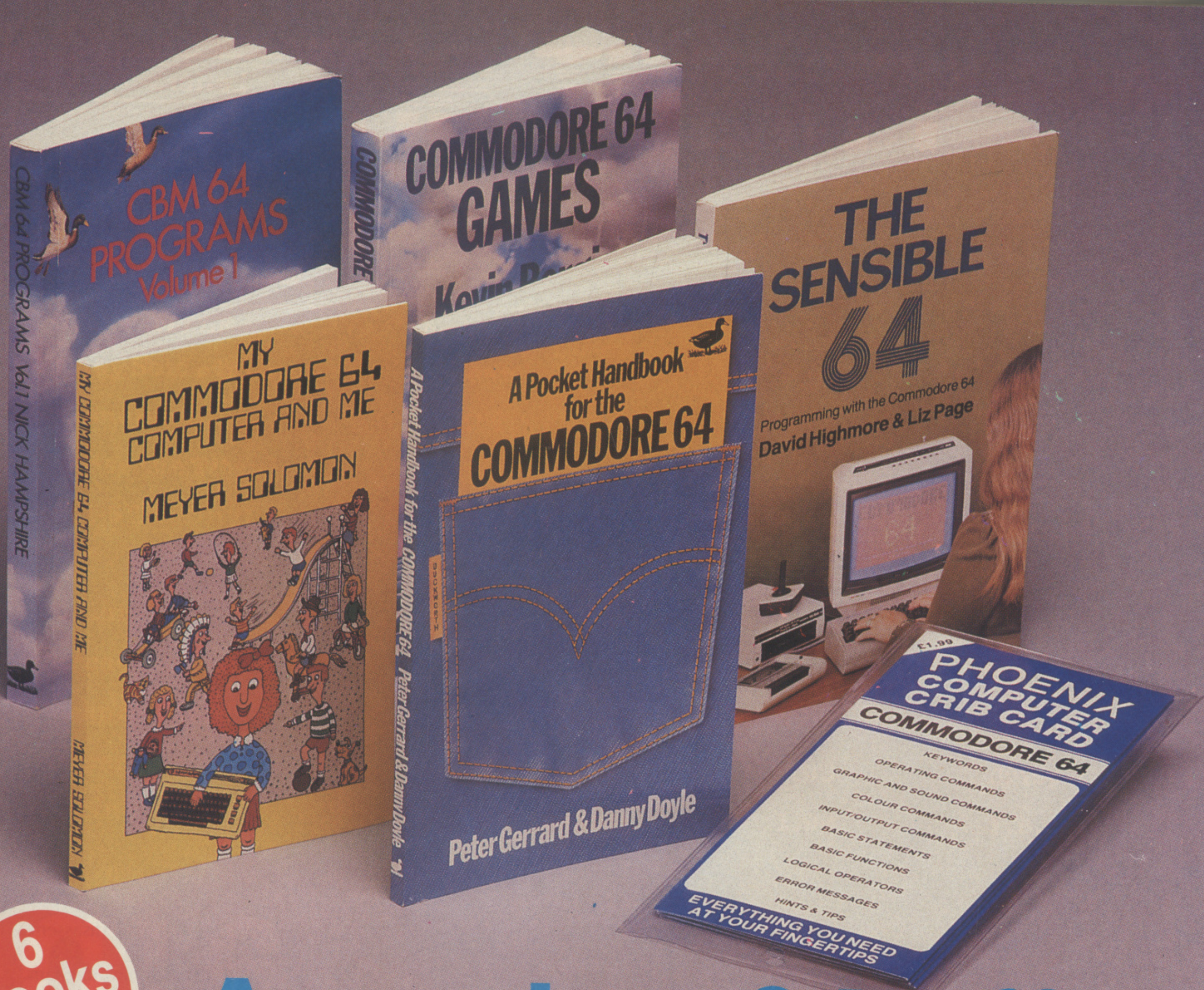
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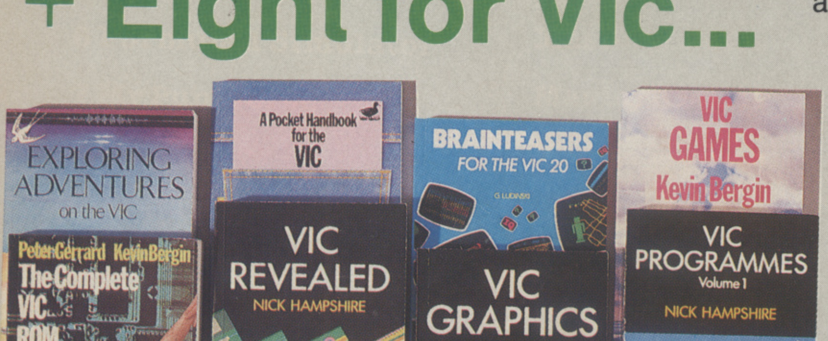
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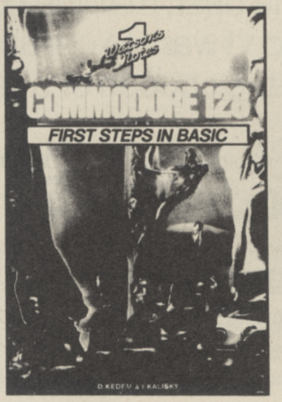

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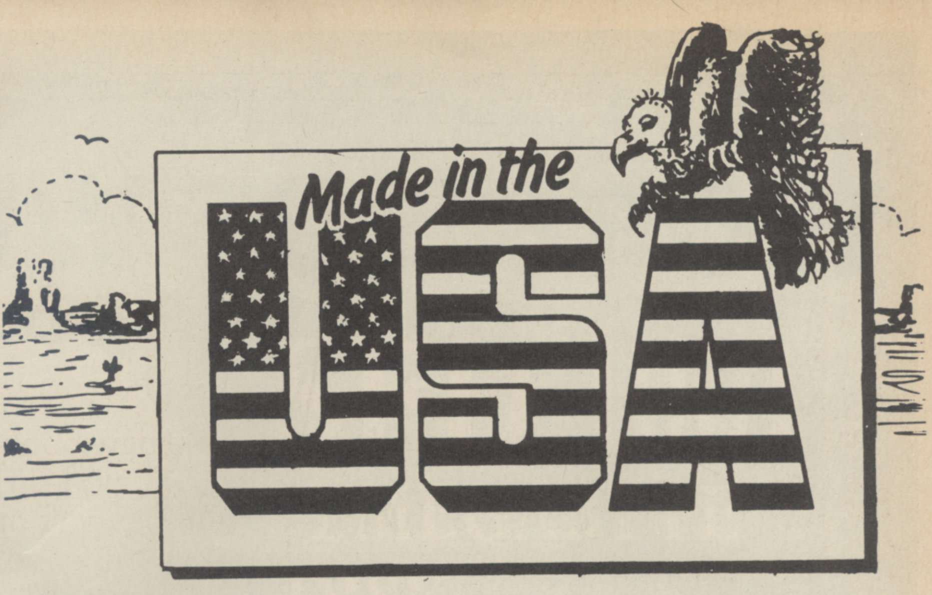

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Give us your poor, give us your hungry and weary. It said down there by the feet of that big old sweetie, the Statue of Liberty. Nowadays its not so easy to jump the Ellis Island hurdle and when the poor and weary manage it, they often stick to their traditions and especially to their languages. So what more natural than for non-English speaking sprouts to use their computers native language wise? Education Software has brought out a 64 program which lets polyglotters form scenes and write a storybook in French, Spanish or German and it introduces them to their first staggering steps in W/P, too.

For others who love to skate not walk (and for nitty gritty reality shout and swear too), there's a new hockey (the ice kind) game from Artwork. The sequel to Slapshot, it gives you 3 levels of skill and if you get too het up and start punching and screaming, you provide a bench-clearing, glove throwing brawl and the resulting penalties really hurt. Sounds like hockey for real, you mapleleafers. Feel like prospecting for a fortune? Well, there's sure gold in these here colums. The Blackship Group is publishing '64 Gold' a library of public domain software. As I'm certain I don't have to tell you (but I will), Public Domain means you can publish or copy free, gratis and for exactly nothing. It's all yours, baby, help yourself to gold, 64 style. It's got programs written by user groups, computer buffs, or programmers. It's got W/P, Educational, Comms, Utilities games, graphics blah, blah and more blah.....It's all free, free, free, or rather for five bucks it is. That's what you pay for the 64 Gold disk. (no, silly Billy it's black). I don't generally give addresses, but there's always an exception. (64 Gold 3219 Folsom St. San Francisco CA 94110).

For you Plus/Fourers, Tallybook (from SMADA) gives you a double entry bookeeping system including a report generator. And for sixty-fourers, there's Windows, a screen processor utility that gives windowing in BASIC or assembly language programs. You get individual window colour controls, move commands, scrolling and more. It costs US$29.95 from St.Mars (that's a Florida Company not a planet Billy, boy).

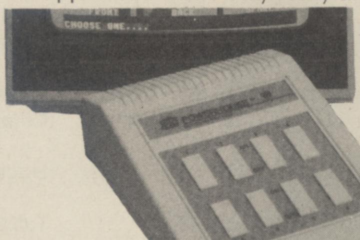
Halley really started something. Zephoy has released CometWatch. It's a 64 program that calculates comet data and lets you plot any comet orbit including old pal Halley, natch. The Halley bit lets you do it for any position in the sky, and date, time, latitude or longditude and when it whizzes past us or the sun, past present or future. Like 5 million years from now will it be here? Will you be here, Billy, old soak? I just doubt it.

Another space, this time global, program is MAPS. It features helicopter races in search of states, cities and waterways. The games are supposed to sneak in a knowledge of geography when you're not looking. Who are they kidding?

The créme de la créme on my dish is MENU. It carries detailed info on over 3000 programs that will run on Commodore machines. MENU will help locate, evaluate and even order oftware. You can even buy through MENU/STX Software service. You want to know from where you get MENU? You want another exception? Holy Moses. I'm shutting my peepers tight, tight, and I do not see, I do not even hear, what I'm writing. MENU Customer Service 1520 South College Aveune, Fort Collins, Colorodo 80524. Got that, Sir Billy?

My fun thing of the moment is Powerhouse. It's an interface. Did I hear you yawn? Well straighten up there, buddy. You are about to be Powerhoused.

The X10 Powerhouse is cable connected to your Commodore, in the user part, and then plugged into a standard electricity outlet (Stateside 110 volt). You pick a room from the display screen, use your joystick or keyboard to position graphics of electrical appliances where they really are and, hey presto, on they'll go for whenever you've programmed them. You can control the light, intensity, you electrifyingly name it. You have to plug the appliance in a special X10 module and the module to the outlet. You can run it on anything electric including air conditioning or telephone answer machines. They claim it can make your housework like powerful magic. Pity it can't put out the cat though. You won't believe me but it costs just US$70 and the modules 17 smackers a throw. Bzzzzz.



Hitting the sidewalks, pitter patter, is (OK don't believe me) Lord British. Lord British (alias Richard Gerriott) is the creator of the latest instalment of the Ultime Saga. NumeroQuatro in the line is a role playing game in which you must develop eight virtues including (stop that copier at once) honesty, compassion, honor and valor. A far and echoing cry from the shoot'em down, burn'em up, smithereen'em popular style of game. For the 64, it's called Quest of the Avator. A two disk job, they say it will give 200 hours of a new dimension in roleplaying. And that's if you're really a high speedy gonzalez!

Maybe the aforementioned Lord 3-bit had Proteus to help him. And what, I hear you wail, is a Proteus. Don't be a bum, Willy, ignorance is no excuse....Proteus, if you know your Greek mythology, was a wise guy who specialised in being the whole caboodle. He (he or it? One at a time, big Billy) could change shape at will. Any shape, anytime anywhere. Research Design has come up with a disk (for a cost $79.95) that lets you take any idea, fool around with it, change its shape, list its parts, expand it, free write it (association of ideas style), 'cube' it, that's look at it from 6 different angles and then ask it who, what, when, where and why?

It means that anyone (yup, that means you too, in the corner, sleepy Billy) anyone can become a bright, blossoming writer. Hey what am I saying? That no good Billy will steal my job!

Proteus takes about 20 secs to learn and saves everything automatically. You can get an upgraded version to transfer to a W/P. With Proteus on your drive, nothing will stop you trying that story idea you've been hatching for years into a Nobel prize winner.

If you really are a nothing nothing and you won't lift the proverbial finger even for Proteus, you will appreciate if someone gives you Failsafe, an 'emergency data processor'. It comes in a glass sided box with instructions. You break the glass panel, take out the wand, apply 2.5 grams of pressure on any compatible surface. You can imitate any characters you have seen on a VDU and to delete them you reverse the wand and apply the opposite end till the date disappears. The Witz Co. its perpetrators, claim it will ward off high-tec myopia, occupy the innocent and provoke raucous mirth. It is, (you guessed it, didn't you William?) a pencil (do you need those instructions?) And Witz want to get their mitts on 20 of your dollaritos for it. They may get yours but there's no way no how they'll see mine, Billy the Kid, even if Failsafe is Made in the USA...

Joe Gene Parris.

WORDS OF WISDOM

The CCI Guide to Computer Books

PART II

It is estimated that over 5000 new book titles are published every year in the U.K. alone. They cover, of course, all subjects but computing is producing a growing number of books around the world. CCI receives many requests for information on titles available. So this month we have compiled a list (to be continued in future issues) of a selection of books likely to interest owners of all Commodore computers. Happy reading!

COMMODORE 64

Title	Author	Price	Imprint	Description
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Commodore 64 Assembler Workshop	B. Smith	£6.95	Shiva	
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6502 Assembly Language Programming	Leventhal	£19.95	McGraw Hill	
An Introduction To 6502 Machine Code	R.A. & J.W. Penfold	£1.95	Babani	
Cracking The Code On The C 64	J.P. Gibbons	£6.95	PAN	
6502 Assembly Language Subroutines	Leventhal	£19.95	McGraw Hill	
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Commodore 64	Bonynge	£10.35	Tab Books	Homes can be a safer, more secure place by using computer controlled systems
The Easy Guide To Your Commodore 64	J. Kascmer	£6.95	Sybex	
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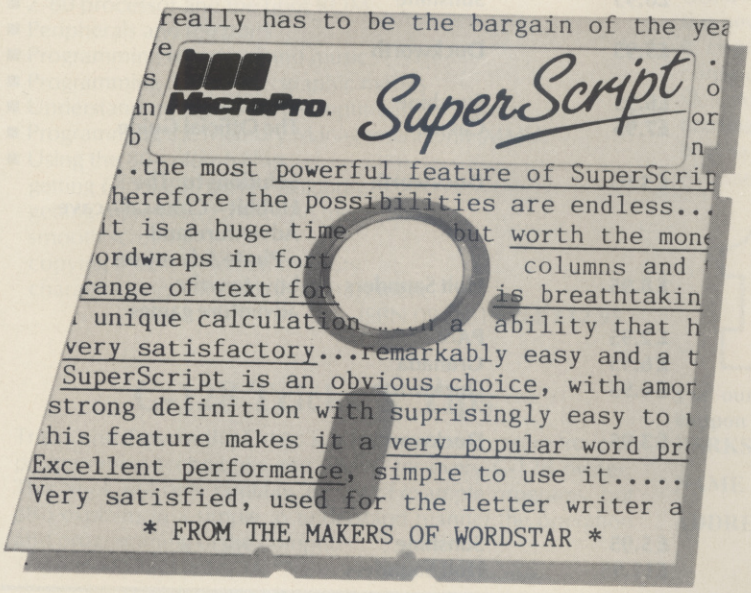

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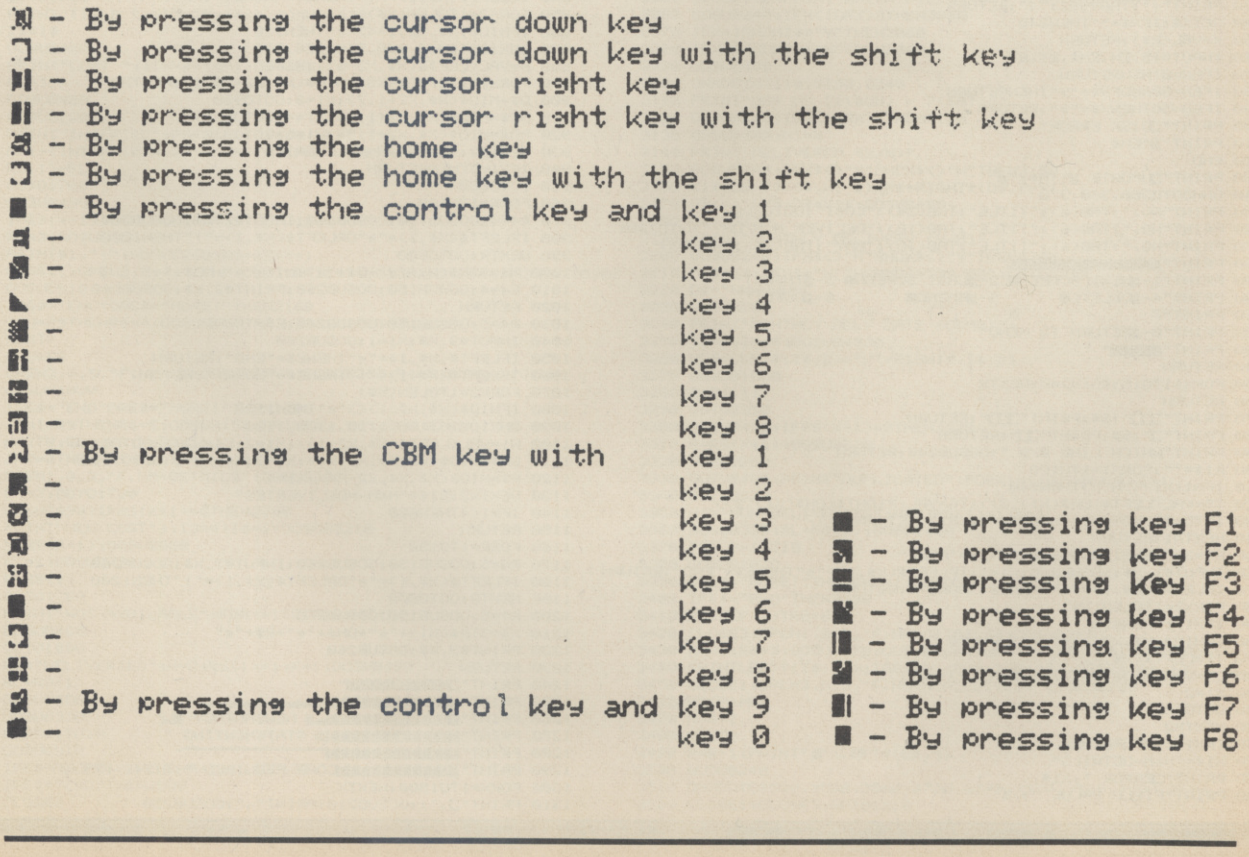

```
■ - By pressing the cursor down key
■ - By pressing the cursor down key with the shift key
■ - By pressing the cursor right key
■ - By pressing the cursor right key with the shift key
■ - By pressing the home key
■ - By pressing the home key with the shift key
■ - By pressing the control key and key 1
■ -                                 key 2
■ -                                 key 3
■ -                                 key 4
■ -                                 key 5
■ -                                 key 6
■ -                                 key 7
■ -                                 key 8
■ - By pressing the CBM key with    key 1
■ -                                 key 2
■ -                                 key 3   ■ - By pressing key F1
■ -                                 key 4   ■ - By pressing key F2
■ -                                 key 5   ■ - By pressing Key F3
■ -                                 key 6   ■ - By pressing key F4
■ -                                 key 7   ■ - By pressing key F5
■ -                                 key 8   ■ - By pressing key F6
■ - By pressing the control key and key 9   ■ - By pressing key F7
■ -                                 key 0   ■ - By pressing key F8
```

NEWS DELIVERY CHECKER

Ever been confused by papers and magazines that you order from a newsagent but don't arrive? Do you get charged for them or is the newsagent super-efficient and always right? as you want to make sure or always know what you owe, here's the program Len Keighley has written for you.

Increasingly over the last few years Newsagents have began to install Micro-computers to control the newspaper and magazine delivery aspect of their business. However, the benefits gained by this implementation have not been apparent to us the Customer.

The program presented here uses the same sort of information to produce a more complete statement. Details shown include the name of the newspaper or magazine delivered as well as the day of delivery and the cost. Text details may also be supplied for the reasons of non-delivery i.e. holidays or strikes.

So the next time you go to the newsagents to pay your bill you can tell him how much you should pay.

The program was written for the C64 but will be easily converted to any of the Commodore range. It makes use of four relative files to hold Newspaper & Magazine details, Deliveries, Non-deliveries and Control information. It runs a delivery cycle of Sunday thru Saturday although this may be changed to suit your own requirements.

```
READY.

 100 OPEN15,8,15:GOSUB260
 110 DIMN1(100),R$(100),DN$(100),N(100),MI$(100),
     MD$(100),D1$(100,7),RS(15)
 120 FORX=1TO7:READDD$(X):NEXTX
 130 S$="                                        ":DIMML(12)
 140 GOTO1240
 150 R2=INT(R/256):R3=R-(R2*256):GOTO190
 160 R2=INT(RS(X)/256):R3=RS(X)-(R2*256):GOTO190
 170 R2=INT(X/256):R3=X-(R2*256):GOTO190
 180 R2=INT(RS(X+1)/256):R3=RS(X+1)-(R2*256)
 190 PRINT#15,"P"CHR$(R4+96)CHR$(R3)CHR$(R2)CHR$(0)
 200 RETURN
 210 PRINT"──────────────────────────────────────";:RETURN
 220 PRINTTAB(38);"|"
 230 PRINT"|";TAB(38);"|":RETURN
 240 GETX$:IFX$=""THEN240
 250 X=VAL(X$):RETURN
 260 INPUT#15,EN,EM$,ES,ET
 270 IFEN=0THENRETURN
 280 IFEN=50ANDF9$="Y"THENRETURN
 290 IFEN=50THENX$="π":RETURN
 300 PRINT"]DISK ERROR"
 310 PRINT"▣"EM$
 320 END
 330 PRINT"]UPDATE ▣";H$;"▣"
 340 ONHGOTO350,360,370
 350 PRINT"NO.";TAB(6);"TITLE";TAB(34);"COST":GOTO380
 360 PRINT"NO.";TAB(6);"TITLE";TAB(18);"DELIVER M M/DAY":GOTO380
 370 PRINT"NO.";TAB(6);"TITLE";TAB(18);"DAY";TAB(24);"REASON"
 380 PRINT"QQQQQQQQQQQQQQQQQ"
 390 PRINT"1-▣NEXT SCREEN■ 2-▣LAST SCREEN■ 3-▣INSERT"
 400 PRINT"4-▣DELETE■       5-▣AMEND■       6-▣DUPLI"
 410 PRINT"7               8               9"
 420 PRINT"0-▣RETURN TO MENU"
 430 PRINT"SQQQQ"
 440 RETURN
 450 FORX=1TO15:RS(X)=0:NEXTX
 460 RETURN
 470 PRINT"]]]";S$:PRINT"]]]":RETURN
 480 PRINT"]";S$:PRINT"]]":RETURN
 490 PRINT"WHICH LINE 0/9 ":GOSUB240:RETURN
 500 R1$="":FORX1=1TO100
 510 IFN1(X1)<>N(X)THEN540
 520 T5=VAL(LEFT$(DN$(X1),2)):T6=VAL(RIGHT$(DN$(X1),2))
 530 IFT5=T3ANDT6=T4THENR1$=R$(X1):RETURN
 540 NEXTX1:RETURN
 550 R4=3:GOSUB150:GOSUB260:E$="MORE"
 560 INPUT#1,X$:GOSUB260:X1=1:IFLEFT$(X$,1)="π"THENE$="END":RETURN
 570 IFLEFT$(X$,1)="!"THENE$="MORE!":RETURN
 580 FORX2=1TOLEN(X$)
 590 IFX1>1THEN650
 600 IFMID$(X$,X2,1)<>"π"THEN650
 610 T$=LEFT$(X$,X2-1)
 620 C%=VAL(MID$(X$,X2+1,LEN(X$)-X2+1))
 630 X1=2
 640 GOTO660
 650 NEXTX2
 660 IFX1=2THENRETURN
 670 X1$="N&M-DETAILS"
 680 PRINT"]ERROR ";X1$
 690 PRINT"FIELD VALUE ";X1
```

```
 700 PRINT"RECORD ";R
 710 END
 720 FORX=1TO100
 730 R4=3:GOSUB170:GOSUB260:INPUT#1,X$:GOSUB260
 740 IFLEFT$(X$,1)="π"ORLEFT$(X$,1)="!"THENGOSUB170:GOTO770
 750 NEXTX:GOTO800
 760 RECORD#1,(RS(X)):GOSUB260
 770 X$=T$+"π"+STR$(C%)+"π"
 780 PRINT#1,X$:GOSUB260
 790 RETURN
 800 PRINT"]FILE ";H$;" FULL":FORX=1TO1000:NEXTX:RETURN
 810 R4=4:GOSUB150:GOSUB260:E$="MORE"
 820 INPUT#2,X$:X1=1:GOSUB260
 830 IFLEFT$(X$,1)="π"THENE$="END":RETURN
 840 IFLEFT$(X$,1)="!"THENE$="MORE!":RETURN
 850 FORX2=1TOLEN(X$)
 860 IFMID$(X$,X2,1)<>"π"THEN930
 870 ONX1GOTO880,890,910,920,930
 880 N=VAL(LEFT$(X$,X2-1)):X1=2
 890 FORX3=1TO7:D$(X3)=MID$(X$,X2+X3,1):NEXTX3
 900 D$=MID$(X$,X2+1,7):X1=3:GOTO930
 910 MI$=MID$(X$,X2+1,1):X1=4:GOTO930
 920 MD$=MID$(X$,X2+1,5):X1=5:GOTO930
 930 NEXTX2:X1$="N&M-DELEVERIES"
 940 IFX1=5THENRETURN
 950 GOTO680
 960 FORR=1TO100
 970 R4=4:GOSUB150:GOSUB260:INPUT#2,X$:GOSUB260
 980 IFLEFT$(X$,1)="π"ORLEFT$(X$,1)="!"THEN1000
 990 NEXTR:GOTO800
 1000 X$=STR$(N)+"π"+D$+"π"+MI$+"π"+MD$+"π"
 1010 R4=4:GOSUB150:GOSUB260:PRINT#2,X$:GOSUB260
 1020 RETURN
 1030 R4=5:GOSUB150:GOSUB260:E$="MORE"
 1040 INPUT#3,X$:X1=1:GOSUB260
 1050 IFLEFT$(X$,1)="π"THENE$="END":RETURN
 1060 IFLEFT$(X$,1)="!"THENE$="MORE!":RETURN
 1070 FORX2=1TOLEN(X$)
 1080 IFMID$(X$,X2,1)<>"π"THEN1130
 1090 ONX1GOTO1100,1110,1120,1130
 1100 N1=VAL(LEFT$(X$,X2-1)):X1=2:X4=X2+1:GOTO1130
 1110 DN$=MID$(X$,X4,X2-X4):X1=3:X4=X2+1:GOTO1130
 1120 R$=MID$(X$,X4,X2-X4):X1=4
 1130 NEXTX2:X1$="N&M-NDELIVERIES"
 1140 IFX1<4THEN680
 1150 RETURN
 1160 FORR=1TO100
 1170 R4=5:GOSUB150:GOSUB260:INPUT#3,X$:GOSUB260
 1180 IFLEFT$(X$,1)="π"ORLEFT$(X$,1)="!"THEN1200
 1190 NEXTR:GOTO800
 1200 R4=5:GOSUB150:GOSUB260
 1210 X$=STR$(N1)+"π"+DN$+"π"+R$+"π"
 1220 PRINT#3,X$:GOSUB260
 1230 RETURN
 1240 PRINT"]QQQQQQQQQQQ"
 1250 PRINT"▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮L────────────"
 1260 PRINT"▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮L▣ NEWSAGENCY ■_"
 1270 PRINT"▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▣ STATEMENTING "
 1280 PRINT"▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮┌────────────"
 1290 PRINT"QQ▮▮▮▮▮▮▮▮▮▮▮▮▮▮CORE REQUIRED ";31742-FRE(0)
 1300 FORX=1TO1500:NEXTX
 1310 PRINT"]┌";:GOSUB210:PRINT"┐":GOSUB230
```

```
1320 PRINT"| 1.  SET UP FILES";:GOSUB220
1330 PRINT"| 2.  UPDATE NEWS & MAGAZINE USAGE";:GOSUB220
1340 PRINT"| 3.  UPDATE DELIVERIES";:GOSUB220
1350 PRINT"| 4.  UPDATE NON-DELIVERIES";:GOSUB220
1360 PRINT"| 5.  PRODUCE STATEMENT";:GOSUB220
1370 PRINT"| 9.  ЯEND■";:GOSUB220
1380 PRINT"└";:GOSUB210:PRINT"┘"
1390 PRINT"ENTER REQUIREMENT"
1400 GOSUB240
1410 ONXGOTO1530,1430,1440,1460,1480,1400,1400,1400,1420
1420 CLOSE15:PRINT"□":END
1430 OPEN1,8,3,"F.NM-DETAILS":GOSUB260:GOTO1770
1440 OPEN2,8,4,"F.NM-DELIVERIES":GOSUB260
1450 GOTO2330
1460 OPEN3,8,5,"F.NM-NONDELIVERY":GOSUB260
1470 GOTO3350
1480 OPEN4,8,6,"F.NM-CONTROL":GOSUB260
1490 R=1:R4=6:GOSUB150:GOSUB260
1500 INPUT#4,LD$:GOSUB260
1510 T3=VAL(LEFT$(LD$,2)):T4=VAL(RIGHT$(LD$,2))
1520 CLOSE4:GOTO4000
1530 F9$="Y":PRINT"□INPUT CURRENT DATE (DDMM) ";
1540 I3=4:I4=4:GOSUB4830
1550 LD$=LEFT$(I$,2)+"/"+RIGHT$(I$,2)
1560 PRINT"▩INPUT DELIVERY CHARGE ";
1570 I3=4:I4=1:GOSUB5210:C%=I
1580 PRINT"QQQQQQQQQ]]]]]]]]]]]]]ЯCREATING RECORDS"
1590 OPEN1,8,3,"F.NM-DETAILS,L,"+CHR$(40):GOSUB260
1600 R=1:R4=3:GOSUB150:GOSUB260
1610 PRINT#1,"DELIVERY CHARGEπ"+STR$(C%)+"π"
1620 GOSUB260
1630 FORR=2TO100:GOSUB150:GOSUB260:PRINT#1,"π":GOSUB260:NEXTR
1640 CLOSE1
1650 OPEN2,8,4,"F.NM-DELIVERIES,L,"+CHR$(30):GOSUB260:R4=4
1660 FORR=1TO100:GOSUB150:GOSUB260:PRINT#2,"π":GOSUB260:NEXTR
1670 CLOSE2
1680 OPEN1,8,5,"F.NM-NONDELIVERY,L,"+CHR$(45):GOSUB260:R4=5
1690 FORR=1TO100:GOSUB150:GOSUB260:PRINT#1,"π":GOSUB260:NEXTR
1700 CLOSE1
1710 OPEN2,8,6,"F.NM-CONTROL,L,"+CHR$(50):GOSUB260
1720 R=1:R4=6:GOSUB150:GOSUB260
1730 PRINT#2,LD$:GOSUB260
1740 CLOSE2
1750 F9$="N"
1760 GOTO1310
1770 H$="NEWSP & MAGS":H=1:GOSUB450:RS(1)=1:R=1
1780 GOSUB330:RL=RS(1):GOSUB450
1790 FORP=1TO10
1800 GOSUB550
1810 IFE$="MORE!"THENR=R+1:GOTO1800
1820 IFE$="END"THEN1870
1830 PRINTP-1;TAB(4);T$;TAB(32);C%/100
1840 RS(P)=R
1850 R=R+1
1860 NEXTP
1870 R=R-1:PRINT"▩";LEFT$(E$,4)
1880 GOSUB240
1890 ONXGOTO1910,1930,1960,2070,2240,2300,1880,1880,1880
1900 CLOSE1:GOTO1310
1910 IFE$="END"THEN1880
1920 R=R+1:GOTO1780
1930 IFRL=0THEN1880
1940 R=RL:RS(1)=0
1950 GOTO1780
1960 PRINT"TITLE ";:I3=25:I4=1:GOSUB4830
1970 T$=I$
1980 GOSUB480
1990 PRINT"COST ";:I3=4:I4=1:GOSUB5210
2000 C%=I
2010 GOSUB480
2020 GOSUB720
2030 PRINT"INSERTED":FORX1=1TO1000:NEXTX1
2040 R=1+(INT(X/10)*10):RL=R-10:IFRL<0THENRL=1
2050 RS(1)=RL
2060 GOTO1780
2070 GOSUB490
2080 IFRS(X+1)=0THENGOSUB480:GOTO2200
2090 R4=3:GOSUB180
2100 PRINT#1,"!":GOSUB260:R9=RS(X+1)
2110 CLOSE1:OPEN2,8,4,"F.NM-DELIVERIES":GOSUB260:R4=4:FORR=1TO100
2120 GOSUB810
2130 IFE$="END"ORE$="MORE!"THEN2160
2140 IFN=R9THENR4=4:GOSUB150:PRINT#2,"!":GOSUB260
2150 NEXTR
2160 CLOSE2
2170 OPEN3,8,5,"F.NM-NONDELIVERY":GOSUB260:R4=5:FORR=1TO100:
     GOSUB1030
2180 IFE$="END"ORE$="MORE!"THEN2200
2190 IFN1=R9THENR4=5:GOSUB150:PRINT#3,"!":GOSUB260
2200 NEXTR:CLOSE3:R=RS(1)
2210 IFR=0THENR=1:RS(1)=1
2220 OPEN1,8,3,"F.NM-DETAILS":GOSUB260
2230 R4=3:GOTO1780
2240 GOSUB490:IFRS(X+1)=0THEN2280
2250 PRINT"NEW COST";:I3=4:I4=1:GOSUB5210
2260 R=RS(X+1):GOSUB550
2270 C%=I:GOSUB760
2280 R=RS(1)
2290 GOTO1780
2300 PRINT"NOT AVAILABLE":FORX=1TO1000:NEXTX
2310 GOSUB480
2320 GOTO1880
2330 H$="DELIVERIES":H=2:RS(1)=1:R=1:GOSUB450
2340 RL=RS(1)
2350 GOSUB450
2360 GOSUB330
2370 FORP=1TO10
2380 GOSUB810
2390 IFE$="MORE!"THENR=R+1:GOTO2380
2400 IFE$="END"THEN2500
2410 CLOSE2
2420 OPEN1,8,3,"F.NM-DETAILS":GOSUB260
2430 X=N:R4=3:GOSUB170:GOSUB260:INPUT#1,X$:X1=1:GOSUB580
2440 CLOSE1
2450 PRINTP-1;TAB(6);LEFT$(T$,10);TAB(18);D$;" ";MI$;" ";MD$
2460 RS(P)=R
2470 OPEN2,8,4,"F.NM-DELIVERIES":GOSUB260
2480 R=R+1
2490 NEXTP
2500 R=R-1:PRINT"▩";LEFT$(E$,4)
2510 GOSUB240
2520 ONXGOTO2540,2560,2590,2960,3030,3300,2510,2510,2510
2530 CLOSE1:CLOSE2:GOTO1310
2540 IFE$="END"THEN2510
2550 R=R+1:GOTO2340
2560 IFRL=0THEN2510
2570 R=RL:RS(1)=0
2580 GOTO2340
2590 R=1
2600 PRINT"□INSERT ";H$:PRINT
2610 FORX=1TO15:RS(X)=0:NEXTX
2620 CLOSE2:OPEN1,8,3,"F.NM-DETAILS":GOSUB260
2630 FORP=1TO15
2640 GOSUB550
2650 IFE$="MORE!"THENR=R+1:GOTO2640
2660 IFE$="END"THENP=15:GOTO2680
2670 PRINTP;TAB(6);T$:RS(P)=R
2680 R=R+1:NEXTP:PRINTLEFT$(E$,4):PRINT
2690 CLOSE1:OPEN2,8,4,"F.NM-DELIVERIES":GOSUB260
2700 PRINT"SELECT ENTRY (0 FOR MORE)";
2710 I3=2:I4=1:GOSUB5210
2720 IFI=0ANDE$="END"THENCLOSE1:CLOSE2:GOTO1310
2730 IFI=0THEN2600
2740 IFF$="Y"THENRETURN
2750 N=RS(I)
2760 PRINT"MONTHLY (Y/N)"
2770 GOSUB240:IFX$<>"Y"ANDX$<>"N"THEN2770
2780 MI$=X$:MD$="99/99":D$="NNNNNNN"
2790 IFX$="N"THEN2850
2800 PRINT"DAY (DD) ";
2810 I3=2:I4=2:GOSUB4830
2820 MD$=I$+"/"
2830 PRINT"MONTH (MM) ";
2840 GOSUB4830:MD$=MD$+I$:GOTO2910
2850 PRINT"□INSERT ";H$:PRINT
2860 D$="":FORX1=1TO7
2870 PRINT"DELIVERED ON ";DD$(X1);" (Y/N)"
2880 GOSUB240:IFX$<>"Y"ANDX$<>"N"THEN2880
2890 D$=D$+X$:PRINT"]□"
2900 NEXTX1
2910 GOSUB960
2920 R=1+(INT(R/10)*10)
2930 RL=R-10
2940 IFRL<0THENRL=1
2950 GOTO2350
2960 GOSUB490
2970 IFRS(X+1)=0THENGOSUB480:GOTO3000
2980 R4=4:GOSUB180
2990 PRINT#2,"!":GOSUB260
3000 GOSUB480:R=RL:RS(1)=RL
3010 IFR=0THENR=1:RL=1
3020 GOTO2350
3030 GOSUB490:IFRS(X+1)=0THEN3280
3040 R=RS(X+1):GOSUB810
3050 GOSUB480:PRINT"WHICH FIELD (DAY-1/MNTH-2/MDAY-3)
3060 GOSUB240:IFX<1ORX>3THEN3060
3070 IFX=1ANDMI$="Y"THEN3060
3080 IFX=3ANDMI$="N"THEN3060
3090 GOSUB480
3100 ONXGOTO3110,3190,3240
3110 PRINT"DAY NO [1(SUN) - 7(SAT)]"
3120 GOSUB240:IFX<1ORX>7THEN3120
3130 GOSUB480:X1=X
3140 PRINT"DELIVERED (Y/N)"
3150 GOSUB240:IFX$<>"Y"ANDX$<>"N"THEN3150
3160 X1$=LEFT$(D$,X1-1)+X$+RIGHT$(D$,7-X1)
3170 D$(X1)=X$:D$=X1$:GOSUB480
3180 GOTO3270
3190 PRINT"MONTHLY DELIVERY (Y/N)"
3200 GOSUB240:IFX$<>"N"ANDX$<>"Y"THEN3200
3210 MI$=X$:IFX$="N"THENMD$="99/99":GOTO3270
3220 D$="NNNNNNN"
3230 GOSUB500
3240 PRINT"MONTHLY DELV DATE (DDMM)";
3250 I3=4:I4=4:GOSUB4830
3260 MD$=LEFT$(I$,2)+"/"+RIGHT$(I$,2)
3270 GOSUB1000
3280 R=RS(1)
3290 GOTO2350
3300 GOSUB490:IFRS(X+1)=0THEN3340
3310 R=RS(X+1):GOSUB810
3320 GOSUB960
3330 GOSUB480:PRINT"DUPLICATED":FORX1=1TO1000:NEXTX1
3340 GOTO2920
3350 H$="NON-DELIVERIES":H=3:RS(1)=1:R=1
3360 GOSUB330:RL=RS(1):GOSUB450
3370 FOR P=1TO10
3380 GOSUB1030
3390 IFE$="MORE!"THENR=R+1:GOTO3380
3400 IFE$="END"THEN3490
3410 PRINTP-1;TAB(6);
3420 CLOSE3:OPEN1,8,3,"F.NM-DETAILS":GOSUB260
3430 X=N1:R4=3:GOSUB170:GOSUB260:INPUT#1,X$:X1=1:GOSUB580
3440 PRINTLEFT$(T$,10);TAB(18);DN$;TAB(24);LEFT$(R$,13)
3450 CLOSE1:OPEN3,8,5,"F.NM-NONDELIVERY":GOSUB260
3460 RS(P)=R
3470 R=R+1
3480 NEXTP
3490 R=R-1:PRINT"▩";LEFT$(E$,4)
3500 GOSUB240
3510 ONXGOTO3530,3550,3580,3730,3790,3950,3500,3500,3500
3520 CLOSE1:CLOSE3:GOTO1310
```

```
3530 IFE$="END"THEN3500
3540 R=R+1:GOTO3360
3550 IFRL(0)THEN3500
3560 R=RL:RS(1)=0
3570 GOTO3360
3580 F$="Y":CLOSE3:GOSUB2590
3590 N1=RS(I):F$="N"
3600 CLOSE2:OPEN3,8,5,"F.NM-NONDELIVERY":GOSUB260
3610 PRINT"■INSERT ";H$
3620 PRINT"■INPUT DAY & MONTH (DDMM) ";
3630 I3=4:I4=4:GOSUB4830
3640 DN$=LEFT$(I$,2)+"/"+RIGHT$(I$,2)
3650 PRINT"■REASON:-";
3660 I3=25:I4=1:GOSUB4830
3670 R$=I$
3680 GOSUB1160
3690 R=1+(INT(R/10)*10)
3700 RL=R-10
3710 IFRL<0THENR=1
3720 GOTO3360
3730 GOSUB490
3740 IFRS(X+1)=0THENGOSUB480:GOTO3770
3750 R4=5:GOSUB180:GOSUB260
3760 PRINT#3,"!":GOSUB260
3770 R=RL:RS(1)=RL:IFRL=0THENR=1:RS(1)=1
3780 GOTO3360
3790 GOSUB490:IFRS(X+1)=0THEN3930
3800 R=RS(X+1):GOSUB1030
3810 GOSUB480:PRINT"WHICH FIELD (DAY-1/REASON-2)"
3820 GOSUB240:IFX<1ORX>2THEN3820
3830 GOSUB480
3840 ONXGOTO3850,3890
3850 PRINT"INPUT DAY/MONTH (DDMM) ";
3860 I3=4:I4=4:GOSUB4830:GOSUB480
3870 DN$=LEFT$(I$,2)+"/"+RIGHT$(I$,2)
3880 GOTO3920
3890 PRINT"REASON:-";
3900 I3=25:I4=1:GOSUB4830
3910 R$=I$:GOSUB480
3920 GOSUB1200
3930 R=RS(1):IFR=0THENR=1
3940 GOTO3360
3950 GOSUB490:IFRS(X+1)=0THEN3990
3960 R=RS(X+1):GOSUB1030
3970 GOSUB1160
3980 GOSUB480:PRINT"DUPLICATED":FORX1=1TO1000:NEXTX1
3990 GOTO3690
4000 PRINT"■INPUT CURRENT W/E SATURDAY (DDMM) ";:TS=0
4010 I3=4:I4=4:GOSUB4830
4020 TD$=LEFT$(I$,2)+"/"+RIGHT$(I$,2)
4030 T1=VAL(LEFT$(I$,2)):T2=VAL(RIGHT$(I$,2))
4040 IFT2<0ORT2>12THEN4000
4050 FORX=1TO12:READML(X):NEXTX
4060 IFT1<1ORT1>ML(T2)THEN4000
4070 OPEN3,8,5,"F.NM-NONDELIVERY":GOSUB260
4080 FORR=1TO100
4090 GOSUB1030
4100 IFE$="END"THENCLOSE3:GOTO4140
4110 IFE$="MORE!"THEN4130
4120 N1(R)=N1:DN$(R)=DN$:R$(R)=R$
4130 NEXTR
4140 OPEN2,8,4,"F.NM-DELIVERIES":GOSUB260
4150 FORR=1TO100
4160 GOSUB810
4170 IFE$="END"THEN4240
4180 IFE$="MORE!"THEN4230
4190 N(R)=N:MI$(R)=MI$:MD$(R)=MD$
4200 FORX=1TO7
4210 D1$(R,X)=D$(X)
4220 NEXTX
4230 NEXTR
4240 CLOSE2
4250 OPEN1,8,3,"F.NM-DETAILS":GOSUB260
4260 OPEN5,4,0:F$="N"
4270 X$=CHR$(1)+"NEWSPAPER & MAGAZINE DELIVERIES"
4280 PRINT#5,X$;CHR$(141);X$
4290 PRINT#5
4300 PRINT#5,CHR$(1);"FROM ";LD$;" TO ";TD$
4310 PRINT#5
4320 PRINT#5,"   DAY    ------------TITLE-------------";
4330 PRINT#5,"  COST   SUB TOTAL NON DELIVERY REASON"
4340 PRINT#5:LC=0:IFF$="Y"THENRETURN
4350 OPEN6,4,2
4360 X$="AAAAAAAA AAAAAAAAAAAAAAAAAAAAAAAAAAAAAA"
4370 X$=X$+" 999.99  9999.99   AAAAAAAAAAAAAAAAAAAAAAAAA"
4380 PRINT#6,X$:DI=1
4390 OPEN7,4,1
4400 T3=T3+1
4410 IFML(T4)<T3THENT3=1:T4=T4+1
4420 IFT4>12THENT4=1
4430 DD$=STR$(T3)+"/"+STR$(T4)
4440 FORX=1TO100
4450 IFN(X)=0THEN4700
4460 IFMI$(X)="Y"THEN4680
4470 IFD1$(X,DI)="N"THEN4700
4480 GOSUB500
4490 R=N(X):GOSUB550
4500 IFE$="MORE!"ORE$="END"THEN4650
4510 IFR1$<>""THEN4530
4520 TS=TS+(C%/100)
4530 X$=DD$(DI)+DD$:X1$=""
4540 FORX1=1TOLEN(X$)
4550 IFASC(MID$(X$,X1,1))<>32THENX1$=X1$+MID$(X$,X1,1)
4560 NEXTX1
4570 IFX1$=X2$THENX3$="":GOTO4590
4580 X3$=X1$:X2$=X1$
4590 PRINT#7,X3$CHR$(29),T$CHR$(29),C%/100,TS,R1$
4600 LC=LC+1
4610 IFLC<57THEN4700
4620 PRINT#5:PRINT#5:PRINT#5:X2$=""
4630 F$="Y":GOSUB4270
4640 GOTO4700
4650 PRINT"■ERROR - MISMATCH ON FILES"
4660 PRINT"DELIVERIES -";X
4670 STOP:GOTO4700
4680 T5=VAL(LEFT$(MD$(X),2))
4690 IFT5=T3THEN4480
4700 NEXTX
4710 IFT1=T3ANDT2=T4THEN4740
4720 DI=DI+1:IFDI>7THENDI=1
4730 GOTO4400
4740 X$="":FORX=1TO7:X$=X$+"-----------":NEXTX
4750 PRINT#5,X$
4760 X$="GRAND TOTAL"
4770 PRINT#7,CHR$(29),X$CHR$(141),CHR$(29),X$CHR$(29),TS
4780 CLOSE5:CLOSE6:CLOSE7:CLOSE1
4790 OPEN4,8,6,"F.NM-CONTROL":GOSUB260
4800 R4=6:R=1:GOSUB150:GOSUB260
4810 PRINT#4,TD$:GOSUB260
4820 CLOSE4:GOTO1310
4830 REM **********************
4840 REM *SUBROUTINE TO INPUT*
4850 REM *A ALPHANUMERIC DATA*
4860 REM *FIELD.             *
4870 REM **********************
4880 I$=""
4890 PRINT" |";
4900 FORI=1TOI3
4910 PRINT"_";
4920 NEXTI
4930 PRINT"| ";
4940 FORI=1TOI3+1
4950 PRINT"▮▮";
4960 NEXTI
4970 GETI1$:IFI1$=""THEN4970
4980 IFI1$=CHR$(13)GOTO5180
4990 IFI1$="■"THEN5190
5000 IFI1$=CHR$(20)THEN5070
5010 IFI1$<>"["THEN5120
5020 I=LEN(I$)
5030 FORI1=1TOI+1
5040 PRINT"▮▮";
5050 NEXTI1
5060 GOTO4880
5070 IFI$=""THEN4970
5080 IFLEN(I$)=1THENI$="":GOTO5100
5090 I$=LEFT$(I$,LEN(I$)-1)
5100 I1$="▮L▮▮"
5110 GOTO5160
5120 IFI1$<" "THEN4970
5130 IFI1$>"Z"ANDI1$<"| "GOTO4970
5140 IFLEN(I$)=I3GOTO5190
5150 I$=I$+I1$
5160 PRINTI1$;
5170 GOTO4970
5180 IFLEN(I$)<I4THEN4970
5190 PRINT
5200 RETURN
5210 REM **********************
5220 REM *SUBROUTINE TO INPUT*
5230 REM *A ALPHANUMERIC DATA*
5240 REM *FIELD.             *
5250 REM **********************
5260 I$=""
5270 PRINT" |";
5280 FORI=1TOI3
5290 PRINT"_";
5300 NEXTI
5310 PRINT"| ";
5320 FORI=1TOI3+1
5330 PRINT"▮▮";
5340 NEXTI
5350 GETI1$:IFI1$=""THEN5350
5360 IFI1$=CHR$(13)GOTO5580
5370 IFI1$="■"THEN5590
5380 IFI1$=CHR$(20)THEN5450
5390 IFI1$<>"["THEN5500
5400 I=LEN(I$)
5410 FORI1=1TOI+1
5420 PRINT"▮▮";
5430 NEXTI1
5440 GOTO5260
5450 IFI$=""THEN5350
5460 IFLEN(I$)=1THENI$="":GOTO5480
5470 I$=LEFT$(I$,LEN(I$)-1)
5480 I1$="▮L▮▮"
5490 GOTO5560
5500 IFI1$="."THEN5550
5510 IFI1$="-"ANDI$=""THEN5550
5520 IFI1$<"0"GOTO5350
5530 IFI1$>"9"GOTO5350
5540 IFLEN(I$)=I3GOTO5590
5550 I$=I$+I1$
5560 PRINTI1$;
5570 GOTO5350
5580 IFLEN(I$)<I4THEN5350
5590 PRINT
5600 I=VAL(I$)
5610 RETURN
5620 DATASUN,MON,TUE,WED,THU,FRI,SAT
5630 DATA31,29,31,30,31,30,31,31,30,31,30,31
5640 DOPEN#1,"F.NM-DELIVERIES"
5650 FORX=1TO20
5660 RECORD#1,(X):INPUT#1,X$:PRINTX$
5670 NEXTX:CLOSE1
5680 DOPEN#1,"F.NM-CONTROL":GOSUB260
5690 RECORD#1,1:GOSUB260
5700 PRINT#1,"07/12"
5710 CLOSE1:END
5720 DOPEN#1,"F.NM-DELIVERIES"
5730 RECORD#1,14:PRINT#1,"π"
5740 RECORD#1,15:PRINT#1,"π"
5750 CLOSE1
READY.
```

Inside Info

ICPUG is a highly influential organisation and brings many benefits to its members across the whole range of Commodore activity. CCI considered that a regular column from ICPUG would be of interest to many readers. The views expressed by ICPUG may not be those of CCI

I was logged on to Compunet the other night, when I received a courier. "CCI magazine has offered us a regular column … we think they need a touch of your caustic wit … phone Antony Jacobson and arrange it …". Well. I did, and here we are. ICPUG in CCI magazine.

So, who or what is ICPUG? ICPUG stands for the Independent Commodore Products User Group. We use Commodore products (predictable), and we're independent of Commodore, CCI, or anybody else. We used to be called the Independent PET User Group back in the heady '70s, but few people seem to know what a PET is these days, yet alone own one.

We do cater for owners/users of all Commodore equipment, from the original 2001-8 to the Amiga (yes, there are some Amiga owners around). Our 2500 odd members somehow manage to get through the 500 pages of newsletter that we produce each year, after staggering home from one of the 70 Regional Group meetings, fighting off the devastatingly attractive discounts, learning machine code, skillfully avoiding expert advice and sending off for the latest disk in the public domain software library. Now and then, some have even been seen using a computer to do some PROGRAMMING!!!

Should you be unable to restrain yourselves from joining us, then drop a line to our membership secretary, Jack Cohen, 30 Brancaster Rd, Newbury Park, Ilford, Essex, IG2 7EP, or phone 01-597-1229. It will only cost you a tenner. Please mention CCI in your correspondence. Even if you only want to find out more, drop Jack a line, 'cos he's very lonely, especially now that CCI has taken over Commodore Horizons and he's got no questions to answer. Still, Rae West is doing a great job in between his superbly massive literary exploits. Rae is also a ICPUG member.

As I write this, the Commodore show is about a week and a half away, and ICPUG is making an appearance there with its own stand and series of seminars. You all know what the show was like, and I expect this issue is filled with reports of how wonderful this or that is. Personally, I'm interested in the new FM chip & keyboard package.

Just in case you were wondering, ICPUG is a non-profit making organisation, and is entirely run by amateurs. We don't get paid for any of this, and sometimes have to give our private lives priority. So, don't be too hard on us if your reply is a little delayed.

Live long and prosper.

One of the most infuriating problems is to be unable to work out a few words in a crossword puzzle. One of CCI's brilliant readers (all CCI's readers are brilliant! Ed.) A. Bull, has come up with a remarkably useful program to help us out.

```
10000 REM ******************************
10010 REM **** CROSSWORD SOLVER ******
10020 REM ******************************
10030 REM        A.BULL JAN '86
10040 REM
10050 PRINT"▯":C=0:F=0:T=0:X=0:N=1:R=1:Y=1:NW=0
10060 DIMW$(26),A$(40),B$(40):X$="ABCDEFGHIJKLMNOPQRSTUVWXYZ"
10070 PRINT"QQQQQQQQQQQ▮▮▮▮▮▮▮▮ENTER WORD (* FOR BLANKS)▮"
10080 PRINT"▮▮▮▮▮▮▮▮▮▮▮▮▮";:INPUTN$:L=LEN(N$):O$=N$:PRINT"▯"
10090 REM
10100 REM **** FIND TOTAL BLANKS *****
10110 REM
10120 FORJ=1TOL:IFMID$(N$,J,1)="*"THENF=F+1
10130 NEXTJ
10140 REM
10150 REM ***** STORE FIRST WORD *****
10160 REM
10170 B$(Y)=N$
10180 X=X+1
10190 C=0
10200 REM
10210 REM ***** POINT CHOICE LIST ****
10220 REM ***** AT PREVIOUS STORE ****
10230 REM
10240 FORY=1TOR
10250 IFT=0 THEN N$=B$(Y):GOTO 10270
10260 N$=A$(Y)
10270 PRINT"▮"
10280 REM
10290 REM ***** FIND NEXT BLANK ******
10300 REM
10310 FORI=1TOL:IFMID$(N$,I,1)="*"THEN10330
10320 NEXTI
10330 REM
```

```
10340 REM **** PRINT LATEST WORD *****
10350 REM
10360 PRINTTAB(14)"▣"N$"■":PRINT
10370 REM
10380 REM ** PRINT LATEST WORD LIST **
10390 REM ***** WITH NEXT BLANK ******
10400 REM *** FILLED WITH ALPHABET ***
10410 REM
10420 FORJ=1TO26:W$(J)=LEFT$(N$,I-1)+MID$(X$,J,1)+RIGHT$(N$,L-I):NEXTJ
10430 FORJ=1TO13
10440 IFJ<10THENPRINTTAB(5)J;W$(J),J+13;W$(J+13):GOTO10460
10450 PRINTTAB(4)J;W$(J),J+13;W$(J+13)
10460 NEXTJ
10470 REM
10480 REM ***** STORE CHOICES IN *****
10490 REM ***** ALTERNATE STORE  *****
10500 REM
10510 PRINTTAB(3)"▣ENTER NUMBERS OF POSSIBLE WORDS"
10520 PRINTTAB(14)"▣(0 TO END)";
10530 INPUTN:PRINT"⊐
10540 REM
10550 REM **** IF NO MORE CHOICES ****
10560 REM
10570 IFN=0THEN10620
10575 IFN=0ANDNW=0THEN10870
10580 C=C+1
10590 IF T=0THEN A$(C)=W$(N):GOTO10610
10600 B$(C)=W$(N)
10610 PRINT"⊐⊐⊐":GOTO10520
10620 NEXTY
10630 REM
10640 REM ****** IF LAST BLANK *******
10650 REM *** AND CHOICE FINISHED ****
10660 REM  THEN PRINT POSSIBLE WORDS
10670 REM
10680 IFX=FANDY=R+1 THEN10870
10690 REM
10700 REM **** IF NOT FINISHED *******
10710 REM *** RESET STORE POINTER ****
10720 REM *** TO CURRENT POSSIBLES ***
10730 REM
10740 R=C
10750 REM ******* SWITCH STORES ******
10760 REM ******** AND RESTART *******
10770 REM
10780 REM
10790 IFT=0THENT=1:GOTO10180
10800 T=0:GOTO10180
10810 REM
10820 REM ******************************
10830 REM *** PRINT POSSIBLE WORDS ***
10840 REM ********* AND END **********
10850 REM ******************************
10860 REM
10870 PRINT"⊐"
10880 PRINTTAB(7)"THE"C;"POSSIBLE WORDS FROM"
10890 PRINTTAB(12)"▣▣"O$"■";" ARE:-":PRINT
10900 FORP=1TOC
10910 IFT=0THENPRINTA$(P);" ";:GOTO10930
10920 PRINTB$(P)" ";
10930 NEXTP:PRINT
10940 PRINTTAB(14)"▣THAT'S ALL !!":END
READY.
```

COMMODORE 128 MEMORY MAP (128 MODE)

This is the fourth and final part of the Commodore 128 Memory map. This month covers memory locations $AFOO (44800) to $FFFF (65535). Lots and lots of jumps! They're everywhere. There are now Kernal type jump tables in both the Basic Rom and the editor routines. I have included the jump locations for those of you who want to delve deeper. I have only covered the Sid and Vic chips in any detail where they differ from the C-64. One of the more interesting areas is the MMU (Memory Management Unit) which lives at $D500. The MMU comprises of 11 registers and is the means by which selection of the processor (8502,Z-80) and computer mode (C-128, C-64 &CP/M) is achieved. Another area which I'm sure will be thoroughly hacked is the 8563 VDC (Video Display Controller). This is the device that gives you that beautiful 80 column screen and stops your word processor screen looking like something Picasso would have been proud of. The VDC has a total of 37 registers. These are not, however, accessed directly but via locations $D600 and $D601. This should give your grey matter something else to ponder over. I look forward to covering both these areas in a great deal more detail in the near future.

```
HEX        DECIMAL

AF00-AF02  44800-44802: Jmp $84B4 Convert floating point to interger
AF03-AF05  44803-44805: Jmp $79C3 Convert interer to floating point
AF06-AF08  44806-44808: Jmp $8E42 Convert floating point to ascii string
AF09-AF0B  44809-44811: Jmp $8052 Convert ascii string to floating point
AF0C-AF0E  44812-44814: Jmp $8815 Convert floating point to an address
AF0F-AF11  44815-44817: Jmp $8C75 Convert address to floating point
AF12-AF14  44818-44820: Jmp $882E MEM - FACC
AF15-AF17  44821-44823: Jmp $8831 ARG - FACC
AF18-AF1A  44824-44826: Jmp $8845 MEM + FACC
AF1B-AF1D  44827-44829: Jmp $8848 ARG - FACC
AF1E-AF20  44830-44832: Jmp $8A24 MEM * FACC
AF21-AF23  44833-44835: Jmp $8A27 ARG * FACC
AF24-AF26  44836-44838: Jmp $8B49 MEM / FACC
AF27-AF29  44839-44841: Jmp $8B4C ARG / FACC
AF2A-AF2C  44842-44844: Jmp $89CA Compute natural log of FACC
AF2D-AF2F  44845-44847: Jmp $8CFB Perform basic INT of FACC
AF30-AF32  44848-44850: Jmp $8FB7 Compute square root of FACC
AF33-AF35  44851-44853: Jmp $8FFA Negate FACC
AF36-AF38  44854-44856: Jmp $8FBE Raise ARG to the MEM power
AF39-AF3B  44857-44859: Jmp $8FC1 Raise ARG to the FACC power
AF3C-AF3E  44860-44862: Jmp $9033 Compute EXP of FACC
AF3F-AF41  44863-44865: Jmp $9409 Compute COS of FACC
AF42-AF44  44866-44868: Jmp $9410 Compute SIN of FACC
AF45-AF47  44869-44871: Jmp $9459 Compute TAN of FACC
AF48-AF4A  44872-44874: Jmp $94B3 Compute ATN of FACC
AF4B-AF4D  44875-44877: Jmp $8C47 Round FACC
AF4E-AF50  44878-44880: Jmp $8C84 Absolute value of FACC
AF51-AF53  44881-44883: Jmp $8C57 Test sign of FACC
AF54-AF56  44884-44886: Jmp $8C87 Compare FACC with MEM
AF57-AF59  44887-44889: Jmp $8437 Generate random floating point number
AF5A-AF5C  44890-44892: Jmp $8AB4 Move ram MEM to ARG
```

```
AF5D-AF5F 44893-44895: Jmp $8A89 Move rom MEM to ARG
AF60-AF62 44896-44898: Jmp $7A85 Move ram MEM to FACC
AF63-AF65 44899-44901: Jmp $8BD4 Move rom MEM to FACC
AF66-AF68 44902-44904: Jmp $8C00 Move FACC to MEM
AF69-AF6B 44905-44907: Jmp $8C28 Move ARG to FACC
AF6C-AF6E 44908-44910: Jmp $8C38 Move FACC to ARG
AF6F-AF71 44911-44913: Jmp $4828 'Optab'
AF72-AF74 44914-44916: Jmp $9B30 'Drawln'
AF75-AF77 44917-44919: Jmp $9BFB 'Gplot'
AF78-AF7A 44920-44922: Jmp $6750 'Cirsub'
AF7B-AF7C 44923-44925: Jmp $5A9B 'Run'
AF7E-AF80 44926-44928: Jmp $51F3 'Runc'
AF81-AF83 44929-44931: Jmp $51F8 'Clear'
AF84-AF86 44932-44934: Jmp $51D6 'New'
AF87-AF89 44935-44937: Jmp $4F4F 'Lnkprg'
AF8A-AF8C 44938-44940: Jmp $430A 'Crunch'
AF8D-AF8F 44941-44943: Jmp $5064 'Fndlin'
AF90-AF92 44944-44946: Jmp $4AF6 'Newstt'
AF93-AF95 44947-44949: Jmp $78D7 'Eval'
AF96-AF98 44950-44952: Jmp $77EF 'Frmevl'
AF99-AF9B 44953-44955: Jmp $5AA6 'Run a program'
AF9C-AF9E 44956-44958: Jmp $5A81 'Setexc'
AF9F-AFA1 44959-44961: Jmp $50A0 'Linget'
AFA2-AFA4 44962-44964: Jmp $92EA 'Garba2'
AFA5-AFA7 44965-44967: Jmp $4DCD 'Execute a line'
AFA8-AFFF 44968-45055: 87 bytes of 255's ($FF's) ?
B000-BFFF 45056-49152: MONITOR
B000-B002 45056-45058: Jmp $B021 Monitor entry
B003-B005 45059-45061: Jmp $B009 Monitor break entry
B006-B008 45062-45064: Jmp $B0B2 Monitor command parser entry
C000-C002 49152-49154: Jmp $C07B Initialize editor & screen
C003-C005 49155-49157: Jmp $CC34 Display char contained in .A in colour.X
C006-C008 49158-49160: Jmp $C234 Get a key from irq buffer & put into .A
C009-C00B 49161-49163: Jmp $C29B Get a char from screen line & put into
C00C-C00E 49164-49166: Jmp $C72D Print character in .A
C00F-C011 49167-49169: Jmp $CC5B Get number of screen row/col & put into
                                                              .X, .Y
C012-C014 49170-49172: Jmp $C55D Scan keyboard subroutine
C015-C017 49173-49175: Jmp $C651 Repeat key logic & store decoded key
C018-C01A 49176-49178: Jmp $CC6A Read or set cursor position in .X, .Y
C01B-C01D 49179-49181: Jmp $CD57 Move 8563 cursor subroutine
C01E-C020 49182-49184: Jmp $C9C1 Execute ESC function using Char in .A
C021-C023 49185-49187: Jmp $CCA2 Redefine a function key
C024-C026 49188-49190: Jmp $C194 Irq entry
C027-C029 49191-49193: Jmp $CE0C Initialize 80 column character set
C02A-C02C 49194-49196: Jmp $CD2E Swap editor location variables (40/80)
C02D-C02F 49197-49199: Jmp $CA1B Set top left or bottom right of window
D000-D02E 53248-53294: MOS 6566 Video Interface Controller (Vic) Same as
                                                                  C-64
D02F      53295      : Reg 47 of the Vic chip in 128 mode. Keyboard
                                                           control reg
D030      53296      : Reg 48 of the Vic chip in 128 mode. 2Mhz switch
                                                                  bit
D400-D41C 54272-54300: Sound Interface Device (Sid) Same as C-64
D500      54528      : Configuration register
D501      54529      : Preconfiguration register A
D502      54530      : Preconfiguration register B
D503      54531      : Preconfiguration register C
D504      54532      : Preconfiguration register D
D505      54533      : Mode configuration register
D506      54534      : Ram configuration register
```

```
D507       54535      : Page 0 pointer low
D508       54536      : Page 0 pointer high
D509       54537      : Page 1 pointer low
D50A       54538      : Page 1 pointer high
D50B       54539      : MMU version number
D600       54784      : 8563 (80 col Video display controller) address
                                                                register
D601       54785      : 8563 (80 col Video display controller) data
D700-D7FF  55040-55295: Reserved I/O block                      register
D800-DBFF  55296-56319: Vic Colour matrix, 1Kb (nibbles)
DC00-DCFF  56320-56575: MOS 6526 Complex Interface Adapter (CIA) number 1
DD00-DDFF  56576-56831: MOS 6526 Complex Interface Adapter (CIA) number 2
DE00-DEFF  56832-57087: Reserved for future I/O expansion
DF00       57088      : DMA controller status register
DF01       57089      : DMA Controller command register
DF02       57090      : Lsb of internal (C128) address to access
DF03       57091      : Msb of internal (C128) address to access
DF04       57092      : Lsb of external expansion ram to access
DF05       57093      : Msb of external expansion ram to access
DF06       57094      : 64K external ram bank
DF07       57095      : Lsb of byte count
DF08       57096      : Msb of byte count (block count)
DF09       57097      : Checksum of last data transfer
DF0A       57098      : DMA version & memory limits
E000-FFFF  57344-65535: Kernal rom (8k)
FF00       65280      : Configuration register (secondary)
FF01       65281      : Latch configuration register A
FF02       65282      : Latch configuration register B
FF03       65283      : Latch configuration register C
FF04       65284      : Latch configuration register D
FF47-FF49  65351-65353: Jmp $E5FB Set up fast serial port for I/O
FF4A-FF4C  65354-65356: Jmp $F23D Close all logical files for a device
FF4D-FF4F  65357-65359: Jmp $E24B Reconfigure system as a C-64 (no return)
FF50-FF52  65360-65362: Jmp $F7A5 Initiate DMA request to external ram
FF53-FF55  65363-65365: Jmp $F890 Boot load program from disk
FF56-FF58  65366-65368: Jmp $F867 Cold start 128 mode
FF59-FF5B  65369-65371: Jmp $F79D Search in the table for logical file
                                                                   numbe
FF5C-FF5E  65372-65374: Jmp $F786 Search for a secondary address
FF5F-FF61  65375-65377: Jmp $C02A Switch between 40 & 80 columns (editor)
FF62-FF64  65378-65380: Jmp $C027 Initialize 80 col character ram
FF65-FF67  65381-65383: Jmp $C021 Program function key
FF68-FF6A  65384-65386: Jmp $F73F Set bank for I/O operations (load/save)
FF6B-FF6D  65387-65389: Jmp $F7EC Lookup MMU data for given bank
FF6E-FF70  65390-65392: Jmp $02CD JSR to any bank, RTS to calling bank
FF71-FF73  65393-65395: Jmp $02E3 JMP to any bank
FF74-FF76  65396-65398: Jmp $F7D0 Load from any bank
FF77-FF79  65399-65401: Jmp $F7DA Store st any bank
FF7A-FF7C  65402-65404: Jmp $F7E3 Compare to any bank
FF7D-FF7F  65405-65407: Jmp $FA17 Print immediate (always JSR to this
                                                                 routin
FF80       65408      : Kernal release number ('00' on my machine)
FF81-FF83  65409-65411: Jmp $C000 Initialize editor & display chips
                                                               (editor)
FF84-FF86  65412-65414: Jmp $E109 Initialize I/O devices
FF87-FF89  65415-65417: Jmp $E093 Initialize ram and buffers for system
FF8A-FF8C  65418-65420: Jmp $E056 Restore vectors to initial system
FF8D-FF8F  65421-65423: Jmp $E05B Change vectors for user
FF90-FF92  65424-65426: Jmp $F75C Control operating system messages
FF93-FF95  65427-65429: Jmp $E4D2 Send secondary address after LISTEN
                                                                 ($FFB1
FF96-FF98  65430-65432: Jmp $E4E0 Send secondary address after TALK ($FFB4)
```

```
FF99-FF9B 65433-65435: Jmp $F763 Set/read top of system ram
FF9C-FF9E 65436-65438: Jmp $F772 Set/read bottom of system ram
FF9F-FFA1 65439-65441: Jmp $C012 Scan keyboard (editor)
FFA2-FFA4 65442-65444: Jmp $F75F Set timeout in IEEE (reserved)
FFA5-FFA7 65445-65447: Jmp $E43E Handshake serial byte in
FFA8-FFAA 65448-65450: Jmp $E563 Handshake serial byte out
FFAB-FFAD 65451-65453: Jmp $E515 Send untalk out serial
FFAE-FFB0 65454-65456: Jmp $E526 Send unlisten out serial
FFB1-FFB3 65457-65459: Jmp $E33E Send Listen out serial
FFB4-FFB6 65460-65462: Jmp $E33B Send talk out serial
FFB7-FFB9 65463-65465: Jmp $F744 Return I/O status byte
FFBA-FFBC 65466-65468: Jmp $F738 Set logical file No, device & secondary
FFBD-FFBF 65469-65471: Jmp $F731 Set length & file name address          addr
FFC0-FFC2 65472-65474: Jmp ($031A) Open logical file
FFC3-FFC5 65475-65477: Jmp ($031C) Close logical file
FFC6-FFC8 65478-65480: Jmp ($031E) Set channel in
FFC9-FFCB 65481-65483: Jmp ($0320) Set channel out
FFCC-FFCE 65484-65486: Jmp ($0322) Restore default I/O channel
FFCF-FFD1 65487-65489: Jmp ($0324) Input from channel
FFD2-FFD4 65490-65492: Jmp ($0326) Output to channel
FFD5-FFD7 65493-65495: Jmp $F265 Load from file
FFD8-FFDA 65496-65498: Jmp $F53E Save to file
FFDB-FFDD 65499-65501: Jmp $F665 Set internal clock
FFDE-FFE0 65502-65504: Jmp $F65E Read internal clock
FFE1-FFE3 65505-65507: Jmp ($0328) Scan stop key
FFE4-FFE6 65508-65510: Jmp ($032A) Read buffered data
FFE7-FFE9 65511-65513: Jmp ($032C) Close all files and channels
FFEA-FFEC 65514-65516: Jmp $F5F8 Increment internal clock
FFED-FFEF 65517-65519: Jmp $C00F return screen window size (editor)
FFF0-FFF2 65520-65522: Jmp $C018 Read/set x,y, cursor co-ordinates (editor)
FFF3-FFF5 65523-65524: Jmp $F781 Return I/O base
FFF6-FFF7 65525-65527: 2 bytes of 255's ($FF'S) ?
FFF8-FFF9 65528-65529: Operating system vector (RAM1)
FFFA-FFFB 65530-65531: Processor NMI vector
FFFC-FFFD 65532-65533: Processor RESET vector
FFFE-FFFF 65534-65535: Processor IRQ/BRK
```

ATTENTION ALL PROGRAMMERS!!

You may be an experienced programmer – you may be a beginner. Either way, you may have come across some useful tips which could make life easier for other CCI readers.

Or maybe you have written a program, either in Basic or assembly language, that you feel is worthy of publication.

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Please enclose a SAE if you wish to have your program returned to you. Please package disks or cassettes carefully!

The address to send contributions to is:

The Editor,
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Don't forget…CCI welcomes programs for all Commodore computers – 64, Plus/4, C16, 128 plus the VIC and PET.

HI-RES SCREEN DUMP

If you've ever wanted to be able to print your High-Resolution pictures on your printer then this could be the answer to your prayers.

Using the programmable graphics on the MPS-801 printer the program manages to reproduce the screen display very accurately considering the awkward 6 × 7 character matrix of the printer.

It works by taking the first seven bits in the leftmost column of the screen, printing them, then taking the first seven bits from the next column and so on until the end of the line at which it takes the next seven bits down in the first column.

Although originally written for the Commodore 128, the routine is easily adapted to any Commodore machine.

The version for the Commodore 64 defaults the starting address of the Hi-res screen to location 8192 (Hex 2000) but can easily be changed by calculating the High and Low byte values of it with the following calculation.

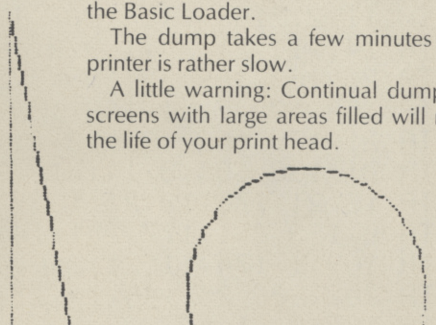
LOW = Start address AND 255
HIGH = Start address / 256
POKE 49309, LOW
POKE 49315, HIGH

Then poking the values in the relevant memory locations or inserting them into the Basic Loader.

The dump takes a few minutes as the printer is rather slow.

A little warning: Continual dumping of screens with large areas filled will reduce the life of your print head.

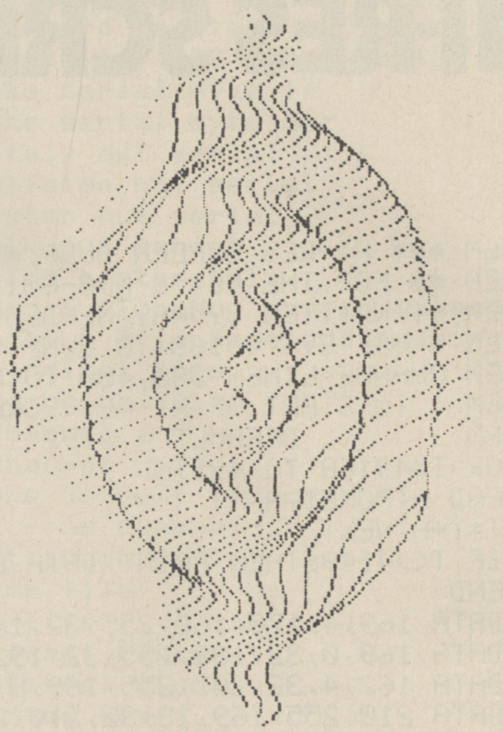
```
10 REM *** HI-RES SCREEN DUMP ***
20 REM ** FOR THE C64 & MPS-801 **
30 REM ** WRITTEN BY RAY MEADES **
40 REM * USE SYS 49168 TO DUMP SCREEN *
50 REM CHANGE LINES 380,400 TO POINT
60 REM   TO START OF HI-RES SCREEN
70 REM          DEFAULT = 8192
80 FOR I=49168 TO 49516
90 READ A:POKEI,A
100 T=T+A:NEXT
110 IF T<>41496THEN PRINT"DATA ERROR"
120 END
200 DATA 169,4,170,160,255,32,186,255
210 DATA 169,0,32,189,255,32,192,255
220 DATA 162,4,32,201,255,169,8,32
230 DATA 210,255,169,13,32,210,255,169
240 DATA 0,141,3,192,169,6,141,4
250 DATA 192,169,0,141,0,192,141,1
260 DATA 192,169,128,141,5,192,173,3
270 DATA 192,141,2,192,173,0,192,141
280 DATA 6,192,173,1,192,41,248,141
290 DATA 7,192,169,0,141,8,192,141
300 DATA 9,192,173,2,192,74,74,74
310 DATA 170,240,23,169,0,168,72,24
320 DATA 152,105,64,168,104,105,1,72
330 DATA 202,208,244,140,9,192,104,141
340 DATA 8,192,173,2,192,41,7,141
350 DATA 10,192,173,1,192,41,7,141
360 DATA 11,192,169,7,56,237,11,192
370 DATA 141,11,192,24,169
380 DATA 0    :REM ***** LOW BYTE  ****
390 DATA 109,9,192,168,169
400 DATA 32   :REM ***** HIGH BYTE ****
410 DATA 109,8,192,170
420 DATA 152,109,7,192,168,138,109,6
430 DATA 192,170,152,109,10,192,141,13
440 DATA 192,138,105,0,141,12,192,172
450 DATA 13,192,173,12,192,133,252,169
460 DATA 0,133,251,177,251,141,14,192
470 DATA 169,1,174,11,192,240,4,10
480 DATA 202,208,252,45,14,192,240,21
490 DATA 173,2,192,56,237,3,192,141
500 DATA 15,192,169,1,174,15,192,240
510 DATA 4,10,202,208,252,24,109,5
520 DATA 192,141,5,192,173,3,192,24
530 DATA 109,4,192,238,2,192,205,2
540 DATA 192,48,3,76,82,192,173,5
550 DATA 192,32,210,255,24,173,1,192
560 DATA 105,1,141,1,192,173,0,192
570 DATA 105,0,141,0,192,169,1,205
580 DATA 0,192,208,7,169,64,205,1
590 DATA 192,240,3,76,65,192,169,13
```

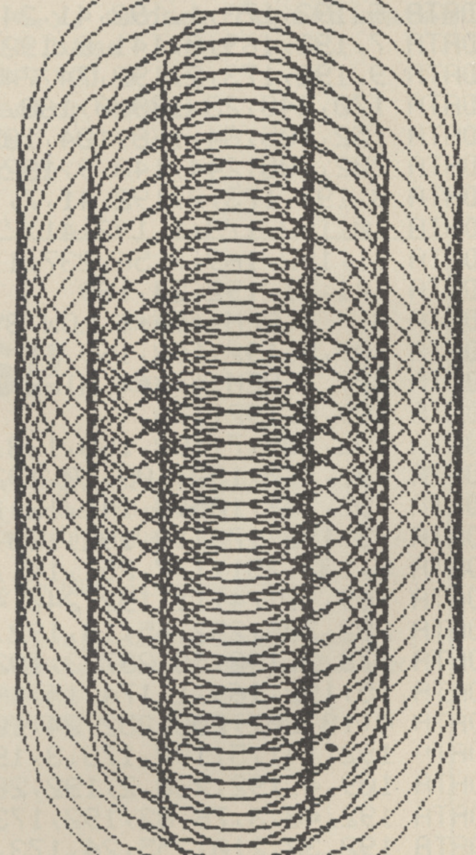


GRAPHICS EXAMPLE

```
600 DATA 32,210,255,173,3,192,24,105
610 DATA 7,141,3,192,201,196,176,3
620 DATA 76,57,192,201,203,240,8,169
630 DATA 3,141,4,192,76,57,192,169
640 DATA 15,32,210,255,169,13,32,210
650 DATA 255,32,210,255,169,4,32,195
660 DATA 255,32,204,255,96

READY.
```





```
2 REM  *** HI-RES SCREEN DUMP ***
4 REM ** FOR THE C128 & MPS-801 **
6 REM ** WRITTEN BY RAY MEADES.
10 FOR I=5392 TO 5740
20 READ A:POKEI,A
30 T=T+A:NEXT
40 IF T<>31578THEN PRINT"DATA ERROR"
50 END
100 DATA 169,4,170,160,255,32,186,255
110 DATA 169,0,32,189,255,32,192,255
120 DATA 162,4,32,201,255,169,8,32
130 DATA 210,255,169,13,32,210,255,169
140 DATA 0,141,3,21,169,6,141,4
150 DATA 21,169,0,141,0,21,141,1
160 DATA 21,169,128,141,5,21,173,3
170 DATA 21,141,2,21,173,0,21,141
180 DATA 6,21,173,1,21,41,248,141
190 DATA 7,21,169,0,141,8,21,141
200 DATA 9,21,173,2,21,74,74,74
210 DATA 170,240,23,169,0,168,72,24
220 DATA 152,105,64,168,104,105,1,72
230 DATA 202,208,244,140,9,21,104,141
240 DATA 8,21,173,2,21,41,7,141
250 DATA 10,21,173,1,21,41,7,141
260 DATA 11,21,169,7,56,237,11,21
270 DATA 141,11,21,24,169,0,109,9
280 DATA 21,168,169,32,109,8,21,170
290 DATA 152,109,7,21,168,138,109,6
300 DATA 21,170,152,109,10,21,141,13
310 DATA 21,138,105,0,141,12,21,172
320 DATA 13,21,173,12,21,133,252,169
330 DATA 0,133,251,177,251,141,14,21
340 DATA 169,1,174,11,21,240,4,10
350 DATA 202,208,252,45,14,21,240,21
360 DATA 173,2,21,56,237,3,21,141
370 DATA 15,21,169,1,174,15,21,240
380 DATA 4,10,202,208,252,24,109,5
390 DATA 21,141,5,21,173,3,21,24
400 DATA 109,4,21,238,2,21,205,2
410 DATA 21,48,3,76,82,21,173,5
420 DATA 21,32,210,255,24,173,1,21
430 DATA 105,1,141,1,21,173,0,21
440 DATA 105,0,141,0,21,169,1,205
450 DATA 0,21,208,7,169,64,205,1
460 DATA 21,240,3,76,65,21,169,13
470 DATA 32,210,255,173,3,21,24,105
480 DATA 7,141,3,21,201,196,176,3
490 DATA 76,57,21,201,203,240,8,169
500 DATA 3,141,4,21,76,57,21,169
510 DATA 15,32,210,255,169,13,32,210
520 DATA 255,32,210,255,169,4,32,195
530 DATA 255,32,204,255,96
READY.
```

OFF THE HOOK

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KONG STRIKES BACK	OCEAN	BLACK THUNDER	QUICKSILVA
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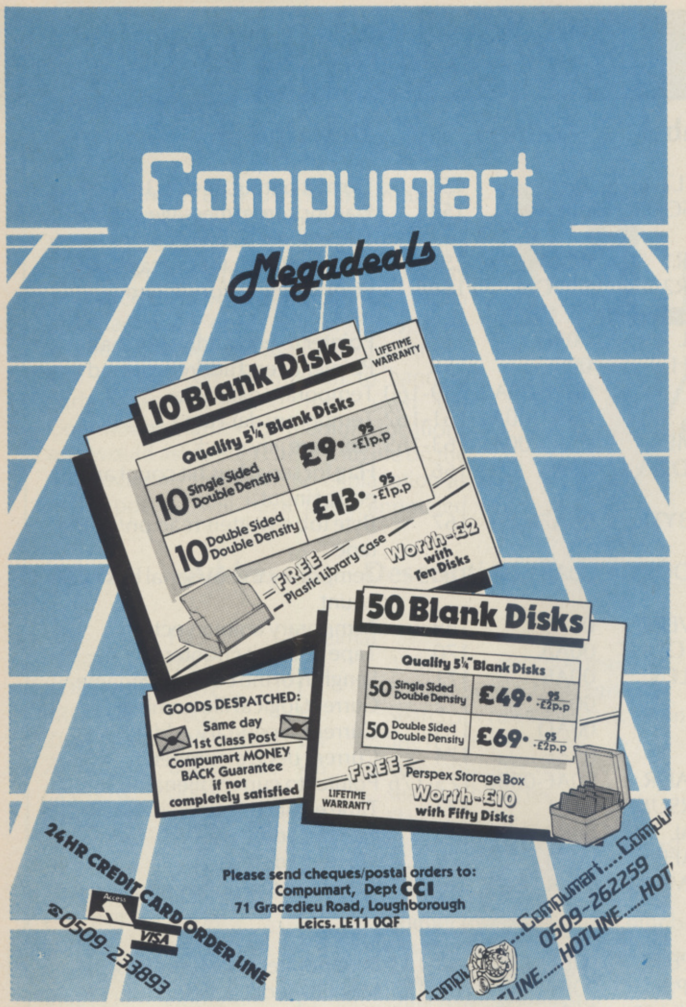
PLUS /4

Yet more on the Plus/4 for the insatiable readers of CCI and fans of the Cinderella machine. I have compiled the memory map of the PLUS/4 from a variety of sources and whereas most I have seen are inaccurate or so full of holes, they would qualify for a swiss cheese award, this cap is based on information to hand in early March 1986. I have used the Commodore lables for memory locations and would ask readers bear with me on the odd locations that have no explanation as to purpose. I will have these annotated after further research. A lot of location bit settings perform inthe same way as those onthe C64, so some familiarity with this machine's architecture will be of value. Note that C16 addresses will be functionally identical although please do not hold me to that since I do not have a C16. There is perhaps even more similarity with the C128, but beware that a lot of locations do not line up in terms of the map, although the functions will be identical. In the coming months I'll be looking at those locations that are either unusual or specific to the PLUS/4.

Label	Address		Description
	Hex	Decimal	
PDIR	0000	0	8501 Data direction register
PORT	0001	1	8501 Input/Output register
SRCHTK	0002	2	Search for run-time stack token
ZPVEC1	0003-0004	3-4	line renumber vector
ZPVEC2	0005-0006	5-6	Line renumber vector
CHARAC	0007	7	search Character
ENDCHR	0008	8	Flag for quote at string end
TRMPOS	0009	9	Screen column number for last Tab
VERCK	000A	10	Flag for input/output load=0 verify=1
COUNT	000B	11	Pointer to input buffer or number of subscripts
DIMFLG	000C	12	Flag for default array
VALTYP	000D	13	Data type: $FF=string $00=numeric
INTFLG	000E	14	Data type: $80=integer $00=floating point
DORES	000F	15	Flag for data scan or list quote or garbage collect
SUBLFG	0010	16	Flag for subscript reference or user function call
INPFLG	0011	17	Flag for input read=$98 get=$40 input=$00
TANSGN	0012	18	Flag for tan sign or compare result
CHANNL	0013	19	Flag for input promt
LINNUM	0014-0015	20-21	Temporary location for integer values
TEMPPT	0016	22	Pointer to temporary string stack
LASTPT	0017-0018	23-24	previous temporary string address
TEMPST	0019-0021	25-33	Stack for temporary strings
INDEX1	0022-0023	34-35	First utility pointer area
INDEX2	0024-0025	36-37	Second utility pointer area
RESHO	0026	38	Start of floating point multiplication work area. These
RESMOH	0027	39	are used by BASIC multiply and divide routines. Also
RESMO	0028	40	used by routines that calculate the area size for
RESLO	0029	41	the memory area size for string array storage. They
RESLOH	002A	42	Are not meant to be interferred with.
TXTTAB	002B-002C	43-44	Start of BASIC pointer
VARTAB	002D-002E	45-46	start of BASIC variables
ARYTAB	002F-0030	47-48	Start of BASIC array
STREND	0031-0032	49-50	End of BASIC arrays + 1
FRETOP	0033-0034	51-52	Pointer to end of BASIC string storage
FRESPC	0035-0036	53-54	Utility string pointer
MEMSIZ	0037-0038	55-56	Pointer to end of Basic
CURLIN	0039-003A	57-58	Current BASIC line number
TXTPTR	003B-003C	59-60	Pointer to BASIC work point
FNDPTR	003D-003E	61-62	Pointer to BASIC stack for cont command
DATLIN	003F-0040	63-64	Current line in data statemen
DATPTR	0041-0042	65-66	Pointer to current data item address
INPPTR	0043-0044	67-68	Vector for input routine
VARNAM	0045-0046	69-70	Current BASIC variable name
VARPNT	0047-0048	71-72	Pointer to current BASIC variable data
FORPNT	0049-004A	73-74	Pointer to index variable of BASIC for/next statement
OPPTR	004B-004C	75-76	Pointer to maths operation table displacement
OPMASK	004D	77	Mask for comparison operation
DEFPNT	004E-004F	78-79	Pointer for current BASIC (fn) descriptor
DSCPNT	0050-0052	80-82	Temporary pointer to current string descriptor
HELPER	0053	83	Help key flag
JMPER	0054	84	Jump to function instruction
SIZE	0055	85	Unknown at time of compilation
OLDOV	0056	86	Unknown at time of compilation
TEMPFI	0057	87	Miscell aneous numeric work area
HIGHDS	0058-0059	88-89	Pointer for block transfer of dim unit
HIGHTR	005A-005B	90–91	Pointer for block transfer
LOWDS	005C-005D	92-93	Pointer for block transfer of dim unit
LOWTR	005E-005F	94-95	Pointer for block transfer
EXPSGN	0060	96	Expont sign of number read $80 + negative
FACEXP	0061	97	Exponet in floating point accumulator No.1
FACHO	0062-0065	98-101	Mantissa in floating point accumulator No.1
FACSGN	0066	102	Sign in floating point accumulator No.1
SGNFLG	0067	103	Number of terms in a series evalution
BITS	0068	104	Overflow byte of floating point accumulator No.1
ARGEXP	0069	105	Exponent in floating point accumulator No.2
ARGHD	006A-0060	106-109	Mantissa in floating point accumulator No.2
ARGSGN	006E	110	Sign in floating point accumulator No.2
ARGHD	006F	111	Result of sign comparison between No.1 and No.2 FPA

Label	Address		Description
FACOV	0070	112	Low order mantissa byte of FPA No.1 for rounding
FBUFPT	0071-0072	113-114	Series evaluation Pointer
AUTINC	0073-0074	115-116	Increment value for auto line numbering $00+ off
MVDFLG	0075	117	Flag when allocation of 10k hires graphic area made
KEYNUM	0076	118	Miscelleneos work values
KEVSIZ	0077	119	Miscelleneous work values
SVNTMP	0078	120	Temporary Location for indirect loads
DSDESC	0079-0078	121-123	Descriptor for ds$
TOS	007C-007D	124-125	Top of runtime stack
TMPTON	007E-007F	126-127	Temporary location used by sound tone and volume
VOINO	0080	128	Sound channel number
RUNMOD	0081	129	Flag for run or direct mode
POINT	0082	130	Using Pointer for decimal mode or status of DOS parser
GRAPHM	0083	131	Current graphic mode
COLSEL	0084	132	Current colour selected
MC1	0085	133	Multicolour 1
FG	0086	134	Foreground colour
SCXMAX	0087	135	Maximum number of columns
SCYMAX	0088	136	Maximum number of rows
LTFLAG	0089	137	Flag for paint left
RTFLAG	008A	138	Flag for paint right
STOPNB	0088	139	Halt painting if backgrond colour not the same
GRAPNT	008C-008D	140-141	Pointer to graphics area
VTEMP1	008E	142	Temporary storage for graphics routines
VTEMP2	008F	143	Temporary storage for graphics routines
STATUS	0090	144	Kernal i/o status word value
STKEV	0091	145	Flag for STOP key pressed
SPVERR	0092	146	Temporary storage for key verification
VERFCK	0093	147	Flag for load routine 0+load 1+verify
C3PO	0094	148	Flag for seial bus buffered oupt character
BSOUR	0095	149	Buffered character for serial bus
YSAV	0096	150	Temporary .v register save area
SCXMAX	0087	135	Maximum number of columns
SCYMAX	0088	136	Maximum number of rows
LTFLAG	0089	137	Flag for paint left
RTFLAG	008A	138	Flag for paint right
STOPNB	008B	139	Halt painting if background colour not the same
GRAPNT	008C-008D	140-141	pointer to graphics area
VTEMP1	008E	142	Temporary storage for graphics routines
VTEMP2	008F	143	Temporary storage for graphics routines
STATUS	0090	144	Kernal i/o status word value
STKEY	0091	145	Flag for STOP/key pressed
SPVERR	0092	146	Temporary storage FORE/key verification
VERFCK	0093	147	Flag for load routine 0=load 1=verify
C3P0	0094	148	Flag for serial bus buffered oupt character
BSOUR	0095	149	Buffered character for serial bus
YSAV	0096	150	Temporary. Y register save area
LDTND	0097	151	Number of open files or index to end-of-file tables
DFLTN	0098	152	Default input device 0=keyboard
DFLTO	0099	153	Default output device 3=screen
MSGFLG	009A	154	Flag for kernal message control $80=direct $00=program
PTR1	009B	155	Error log index for first tape pass
PTR2	009C	156	Error log index for second tape pass
EAL	009D	157	Pointer to end address of load
EAH	009E	158	Pointer to end address of load
T1	009F-00A0	159-160	Temporary data area
T2	00A1-00A2	161-162	Temporary data area
TIME	00A3-00A5	163-165	Software jiffy clock
R2D2	00A6	166	Flag for serial bus bit count and end of input
TPBYTE	00A7	167	Byte tob e written/read on/off the tape
BSOUR1	00A8	168	Temporary use by serial bus cycle count
FPVERR	00A9	169	Temporary colour vector
DCOUNT	00AA	170	Tape write bit counter
FNLEN	00AB	171	Lenghth of the current filename
LA	00AC	172	Current logical file number
SA	00AD	173	Current secondary address
FA	00AE	174	Current decive number
FNADR	00AF-00B0	175-176	Pointer to current filename
ERRSUM	00B1	177	Tape error count
STAL	00B2	178	I/O start address
STAH	00B3	179	I/O start address
MEMUSS	00B4-00B5	180-181	Tape load temporary addresses
TAPEBS	00B6-00B7	182-183	Base pointer to cassette base
TMP2	00B8-00B9	184-185	Miscellaneous pointers
WRBASE	00BA-80BB	186-187	Pointer to data for tape writes
IMPARM	00BC-00BD	188-189	Pointer to immediate string for primms
FETPTR	00BE-00BF	190-191	Pointer to byte to be fetched in bank-switching routine
SEDSAL	00C0-00C1	192-193	Temporary location for screen scrolling
RVS	00C2	194	Flag for print reverse characters 0=off
INDX	00C3	195	Pointer to end of logical line for input
LXSP	00C4-00C5	196-197	Cursor X, Y position at start of point
SFDX	00C6	198	Matrix co-ordinate of current key pressed
CRSW	00C7	199	Flag for input from keyboard or screen
PNT	00C8-00C9	200-201	Pointer to the address of current screen line
PNTR	00CA	202	Cursor column on current line
QTSW	00CB	203	Flag for editor in quote mode 0=no
SEDT1	00CC	204	Temporary use by editor
TBLX	00CD	205	Current cursor physical line number
DATAX	00CE	206	Temporary storage ASCII value of last printed character
INSRT	00CF	207	Flag insert mode, no. greater than 0 is no., of inserts
FREKZP	00D0-00EB	208-232	Free zero page area for user
CIRCEG	00E9	233	Screen line link table
USER	00EA-00EB	234-235	Pointer to address of current screen colour location
KEYTAB	00EC-00ED	236-237	Vector for keyboard decode table
TMPKEY	00EE	238	Temporary use for keyboard decoder
NDX	00EF	239	Number of characters in keyboard buffer
STPFLG	00F0	240	Pause flag



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Label	Address		Description
TO	00F1-00F2	241-242	Monitor zero page storage
CHRPTR	00F3	243	Unknown at time of compilation
BUFEND	00F4	244	Unknown at time of compilation
CHKSUM	00F5	245	Temporary location for checksum calculation
LENGTH	00F6	246	Unknown at time of compilation
PASS	00F7	247	Unknown at time of compilation
TYPE	00F8	248	Unknown at time of compilation
USEKDY	00F9	249	Unknown at time of compilation
XSTOP	00FA	250	Save .X register for quick STOP key test
CURBNK	00FB	251	Current bank configuration
XON	00FC	252	Character to send for RS232 x-on mode
XOFF	00FD	253	Character to send for RS232 x-off mode
SEDT2	00FE	254	Temporary use by screen editor
LOFBUF	00FF	255	Unknown at time of compilation
FBUFR	0100-010F	256-271	Unknown at time of compilation
SAVEA	0110	272	Temporary location for
SAVEY	0111	273	save and
SAVE	0112	274	restore
Page	1		
COLKEY	0113-0122	275-290	Colour/luminance table in RAM
SYSSTK	0124-01FF	291-511	System Stack
BUF	0200-0258	512-600	BASIC line editor input buffer
OLDLIN	0259-025A	601-602	BASIC storage
OLDTXT	025B-025C	603-604	BASIC storage
XCNT	025D	605	DOS loop counter
FNBUFR	025E-026D	606-621	Buffer for 1st filename
DOS	026E	622	Lenght of 1st filename 0-1
DOSD1	026F	623	Device number of 1st drive
DOS1	0270-0271	624-625	Address of 1st filename
DOSF2L	0272	626	Length of 2nd filename
DOSDS2	0273	627	Device number of 2nd drive
DOSF2A	0274-0275	628-629	Address of 2nd filename
DOSLA	0276	630	DOS logical address
DOSFA	0277	631	DOS physical address
DOSSA	0278	632	DOS secondary address
DOSDID	0279-027A	633-634	Current disk ID
DIDCHK	027B	635	Flag for disk ID
DOSSTR	027C	636	DOS output string buffer
DOSSPC	027D-02AC	637-684	Buffer for generating DOS output strings
XPOS	02AD-02AE	685-686	Graphic variable current X position
YPOS	02AF-02B0	687-688	Graphic variable current Y position
XDEST	02B1-02B2	689-690	Graphic variable destination direction X-co-ordinate
YDEST	02B3-02B4	691-692	Graphic variable destination direction Y-co-ordinate
XABS	02B5-02B6	693-694	X/Y absolute for graphic lines X-absolute
YABS	02B7-02B8	695-696	X/Y absolute for graphic lines Y-absolute
XSGN	02B9-02BA	697-698	X/Y sign number X-sign
YSGN	02BB-02BC	699-700	X/Y sign number Y-sign
FCT1	02BD-02C0	701-704	Graphic lines factor variable
ERRVAL	02C1-02C2	705-706	Error value
LESSER	02C3	707	Smaller marker
GREATR	02C4	708	Larger marker
ANGSGN	02C5	709	Sign of angle
SINVAL	02C6-02C7	710-711	Sine of the angle value
COSVAL	02C8-02C9	712-713	Cosine of the angle value
ANGCNT	02CA-02CB	714-715	Angle distance

The following 24 bytes are used for a variety of purposes. They are termed the 'multiply defined area' and the area is numbered from 1 to 5 depending on use.

Multipy defined area No.1 – PRINT USING Work Area.

PHLDER	02CC	716	Placeholder
BNR	02CD	717	Pointer to starting number
ENR	02CE	718	Pointer to finishing number
DOLR	02CF	719	Flag for dollar sign
FLAG	02D0	720	Flag for comma
SWE	02D1	721	Counter
USGN	02D2	722	Sign exponent
UEXP	02D3	723	Pointer to exponent
VN	02D4	724	Number of digits before the decimal point
CHSN	02D5	725	Justify flag
VF	02D6	726	Number of places before the decimal point
NF	02D7	727	Number of places after the decimal point
PDSP	02D8	728	Flag for +/−
FESP	02D9	729	Flag for exponent
ETDF	02DA	730	Switch
CFORM	02DB	731	Character counter
SNO	02DC	732	Sign number
BLFD	02DD	733	Flag for blank/star
BEGFD	02DE	734	Pointer to beginning of the field
LFOR	02DF	735	Lenght of format
ENDFD	02E0	736	Pointer to end of the field

Multiply defined area No.2 – Grahpics general purpose work area

XCENTR	02CC-02CD	716-717	Centre for X co-ordinate
YCENTR	02CE-02CF	718-719	Centre for Y co-ordinate
XDIST1	02D0-02D1	720-721	Distance 1 for X co-ordinate
YDIST1	02D2-02D3	722-723	Distance 1 for Y co-ordinate
XDIST2	02D4-02D5	724-725	Distance 2 for X co-ordinate
YDIST2	02D6-02D7	726-727	Distance 2 for Y co-ordinate
ENDIST	02D8-02D9	728-729	End of co-ordinate distance
COLCNT	02DA	730	Column counter for characters
ROWCNT	02DB	731	Row counter for characters
STRCNT	02DC	732	Lenght counter for string

Multiply defined area No.3 – Graphic rectangle routines work area

XCORD1	02CC-02CD	716-717	X co-ordinate
YCORD1	02DE-02CF	718-719	Y co-ordinate
BOXANG	02D0-02D1	720-721	Rotation angle
XCOUNT	02D2-02D3	722-723	Counter for X value
YCOUNT	02D4-02D5	724-725	Counter for Y vaLUE
BXLENG	02D6-02D7	726-727	Lenght of a side of the rectangle
XCORD2	02D9-02D9	728-729	X co-ordinate
YCORD2	02DA-02DB	730-731	Y cp-ordinate

Multiply defined area No.4 – Graphic circle routines work area

XCIRCL	02CC-02CD	716-717	Centre for X co-ordinate of circle centre
YCIRCL	02CE-02CD	718-719	Centre for Y co-ordinate of circle centre
XRADUS	02D0-02D1	720-721	X radius
YRADUS	02D2-02D3	722-723	Y radius
ROTANG	02D4-02D7	724-727	Rotation angle
ANGBEG	02D8-02D9	728-729	Start of arc angle
ANGEND	02DA-02DB	730-731	Finish of arc angle
XRCOS	02DC-02DD	732-733	X-radius * COS (rotation angle)
YRSIN	02DE-02DF	734-735	Y-radius * SIN (rotation angle)
XRSIN	02E0-02E1	736-737	X-radius * SIN (rotation angle)
YRCOS	02E2-02E3	738-739	Y-radius * COS (rotation angle)

More next month folks!

MICES!

You don't have to own an Amiga to use a mouse, Bill Donald reviews two that work with the 64/128

For those of you who are unfamilar with a mouse, the device is basically an inverted tracker-ball. By moving the mouse over a non-slip surface coupled with the driver software loaded into the machine the cursor moves in accord with the mouse. However, the latest mice are rather more than just cursor manipulators. The addition of buttons allows further input to the machine from the mouse for the selection of options positioned within the screen display. Naturally, all of this is very much dependant on the driver software for the mouse itself and not least the ability of the machine to support the mouse. In the 8-bit Commodore world, the mouse has started to percolate through from the realms of the Macintosh, Apricot and other 16-bit machines as users realise the benefits. The 'MIGHTY MOUSE' and the quaintly named 'MOUSE-CHEESE' for use on the C64 or C128 (in C64 mode) are the two most recent to appear.

MOUSE-CHEESE comes complete with a cassette and documentation covering the use of the software and also a very brief technical description of the mouse. The documentation is nothing ostentatious, purely two folded sheets of A4 sized paper. These sheets are coloured malachite green, presumably in an effort to overcome photo-copying; given the amount of material that is present a somewhat wasted effort. MIGHTY MOUSE came in a very impressive package, the side of which proclaimed several optional types of machine supported depending on which outline box had been marked. In this instance it was Commodore and Amstrad. This latter discovery raised an eyebrow and on unpacking I found not just a mouse but a small box as well. This is clearly needed since this mouse is required to interface to two totally different machines. There was no driver software supplied and a single sheet covered merely the connection procedure for each machine.

The documentation for both could only be described as adequate, although the MOUSE-CHEESE product did include a trouble-shooting section and details on maintaining the mouse. This latter point is important since a mouse is a mechanical device. The suppliers of MIGHTY MOUSE seem to have difficulty with English and there are a couple of translation problems. One thing their documentation did convey to me was the complexities of Amstrad wiring, just another reason I'm glad not to have bought one. However, ignoring this they would do well to provide us with details such as those found in MOUSE-CHEESE. Neither provided any programming details, a definite black mark there.

The software included in with the MOUSE-CHEESE package was good. There is full support of the available colours, the DATEX mouse software I looked at last year overlooked this elementary point by only providing 2 colours, absolutely ludicrous on a machine providing 16 colours. Curiously, although this software allowed circles, there was no facility to draw curves. Also the circle placement did not correspond with the positioning of the cursor, a programming problem that needs looking at. MOUSE-CHEESE does give area copying and a nice magnify facility, useful for adding fine detail to your pictoril efforts. The fill algorithm used is certainly good and resulted in a very impressive execution speed, probably the fastest I have seen or thought capable on the C64. The cursor also changes shape depending on where it was positioned on the screen, a neat touch.

One or two disappointments with the software. I felt it restrictive that loading and saving could only be done to tape. By now, what with falling prices and user awareness, most users of the C64 will have a disk drive and the thought of saving and loading high resolution screens representing substantial pieces of code is not a gook way to pass time.

Similarly, the printer support only extened to the Commodore serial printers such as the MPS 801, 803 and 1525. There are a lot of Centronics printer users out there, myself included, and restrictions like this limit the appeal of the product.

I feel that the definitive graphics program that makes use of, what is after all a standard input device, has yet to arrive. Marketing managers please note, we would like perspective drawing, circles, user definition of fill patterns and brushes, wide support of output devices and not least some example drawings. This latter requirement is a personal plea, since my artistic abilities on a scale from 1 to 10 lie closer to the 1 than the 10. The point being, that a good piece of graphics software should allow the clumsiest of users to be able to produce work that appears to have been done by a trained person. I need only say that such packages for the AMIGA such as De-Luxe Paint and Aegis Images succeed in this objective, although obviously heavy use is made of the hardware, but there are some useful ideas there that could be implemented on the 8-bit machines by good programming. Incidentally, let's not forget the PLUS/4, a very capable graphics machine which, if anything, is easier for the assembler programmer.

Overall the software for MOUSE-CHEESE was slightly better than adequate, but gave the impression that the programmer was stopped from showing his or her full capabilities probably because of time constraints. This was confirmed by the fact that although the mouse has two buttons only one is actually used with this software. The mouse itself was fine and I could not fault it in operation with this software in terms of robustness. I also tried MOUSE-CHEESE out with other software and found no problems. MIGHTY MOUSE also worked with the software that I had to hand at the time.

I did not like the interface box used with MIGHTY MOUSE. It struck me as a kludge for Amstrad machines which we, as Commodore users should not have to suffer. Using a mouse needs some space around machine, usually an absolute minimum of 6 by 6 inches. I don't know about you but space is not at a premium around my work area and additional cables and box are not welcome when I have to find space to place and use the mouse. There is also another point that suppliers have overlooked. I happen to be left-handed and the mouse falls naturally to use in this hand. The connector ports for a mouse or joystick on all the Commodore machines that I own including the AMIGA are on the right hand side. The result can be awkward on occasions as cables become dragged over the front of the machine; start adding an interface box with it's cables and you see my complaint more clearly.

So my vote goes to the CHEESE-MOUSE. The software could be improved, but this mouse has that feel of quality about it. MIGHTY MOUSE is in sore need of a product rethink, I'm certainly unhappy about the interface box, it is unnecessary and poorly made. However, remember the old adage 'try before you buy', your mouse could be with you on your next machine.

'MICROCLERK'

The concept of MICROCLERK is to provide a selection of programs that are integrated with each other and can interact the data between them. The software is designed to run on a C128 in 80 column mode in either colour or monochrome. There are 5 elements to MICROCLERK, a simple book-keeping function named CASHBOOK, wordprocessor, database, spreadsheet and messaging system. The target audiences are small businesses, i.e. less than 10 employees, self-employed and sole traders. Each of these elements is specifically designed to be simple to use without limiting its scope.

The book-keeping section is structured as a nominal ledger, although this is deliberately hidden from the user, with full double-entry procedures. This takes care of anyone trying to 'fiddle' the books because the program will not allow deletions of key data after entry. This section is termed the CASHBOOK by MICROCLERK and the new purchaser is invited to set up the headings (data fields to you and me) and to which timescale the accounts are to be run, i.e. on a weekly or monthly basis. The inclusion of VAT or non-VAT registered user and accounting year options are also present and not least an audit trail for the benefit of the user's accountant and VAT inspector. The set-up structure has a final verification from the user before writing to disk and this allows for error correction, very useful if you are not used to dealing with accounts.

The all-important banking aspects of the users business are well handled by MICROCLERK and are detailed beyond the level of the quantity of funds paid into the bank, but in what form these payments took, such as different types of credit card, cheques or good old cash. Money transfers, standing orders and direct debits are all catered for.

System security and integrity looms very large in MICROCLERK, data loss or errors are potentially a catastrophic condition for any user of a computer. Suffice it to say that after extensive field trials of a mythical company of my own creation, I am quite satisfied in this direction.

Internal security is made very tight within the accounts module. There are 3 levels of passwords to access certain parts of the module and failsafe features such as yes/no techniques also provide a block on data discard routines and the users would feel they are operating in a safe but secure environment.

MICROCLERK makes very good use of the windows facilities of the C128 and these appear as short but concise message boxes or menus without actually obscuring what is happening on the main screen. Windows can make any software perform well or unintelligent use of windows means blinding the user with useless information or leading them down dead-ends by not giving a choice to back-track. MICROCLERK avoids this and also relies on very simple and easily learned keyed sequences to move around within the program.

The most impressive feature had to be the printout obtained by requesting the VAT return or monthly/weekly accounts. These were all fully formatted and really looked professional on my Epson. I would imagine that to do these from scratch would take many hours of work and it was nice to see 'my company' making millions! These reports including the VAT return can also be output to the screen rather than to the printer and are not restricted to profit and loss accounts. For instance a report could be requested for details of bankings, stock value or even an audit trail.

The other features of MICROCLERK such as the messaging system which is termed the JOTTER by the program are also very useful. For instance on program startup the opening screen formed the closing screen the last time the system was in use and can be used to leave messages to the user or other users of the system.

The JOTTER is part of a collection of utilities gathered around the function keys of the C128 and which are accessable at any time. Whereas CASHBOOK is an application module for operating with MICROCLERK these utilities are always available and information picked up by a function can be transfered into a module or another function. An example of this is the TYPEWRITER function which allows direct linkage of the keyboard to the printer.

The wordprocessor in MICROCLERK has an efficient mail merge facility in addition to the conventional features found in a word processor. It does not pretend to offer the range of text management found in a dedicated wordprocessor such as SUPERSCRIPT but it is unlikely the user would be disappointed. Format control over the printed output is made by setting values on a printer definement screen and this package supports both a Centronics printer from the User Port or a Commodore serial printer. I found that the wordprocessor was more than adequate.

The database module also fell into this category, a nice, simple, no-frills, flat-file indexing system. The mail merge facility using the logical operators of DR, AND or NOT amongst others, was very good and the master program disk contained several examples and suggestions of labels and reports.

The spreadsheet module allows a sheet size of 26 columns by 50 rows with a formula line of 70 characters. Cell sizes are fixed at 9 character per cell. Once again, in the context to which it applies a spreadsheet of this structure is ample. It is possible to overlay the spreadsheet with another by avoiding the use of the same cells in each and the manual helpfully explains the file structure of the spreadsheet since these are standard sequential files, most of the other files on the disks were relative files, MICROCLERK makes very good use of screen colours and an option exists for the user to redefine these to personal taste.

The manual itself was helpful, not condescending to those who were experienced users and was written in friendly manner. Of particular value to the uninitiated was the troubleshooting section which gave some good solid advice, usefully describing how the problem probably occurred. Two appendices and an explanatory letter to the users accountant and VAT inspector about MICROCLERK as well as an index rounded off a well written text.

MICROCLERK is a very well thought out and above all usable software package. The facilities offered are comprehensive and not cloaked in computer jargon or technique. The program is at pains to camouflage both the intricacies of the machine and accountancy from the user. Where the computer has been brought into the users eyeline is where it is important and such matters as care of disks and control of disk data through an emphasis on backup procedures is made very clear. This clarity of purpose extends throughout the program and is shown by the extremely high degree of integration. The accounts module is the first of a series that will be more specifically tailored to users, the other modules planned being Sales and Purchase Ledgers, Payroll, Stock Control and direct applications such as Hotels, Newsagents and Garages.

This is a very, very good piece of software and will reap the rewards it obviously deserves for itself and its buyers.

Suppliers: Commodore Business Machines (UK) Ltd. (0536 205555)
JCL Software Ltd. (0892 27454)
Cost: £99.95 (incl. VAT)

MICROCOMPUTER HARDWARE SUPPLIES

COMPUTERS	
Commodore 64 Compendium C2N/Music Maker/A. Mole etc	160.00(a)
Commodore 128D inc. Built-in 1571 Disk Drive	383.00(a)
Commodore 128D inc. Built-in 1571 Disk Drive + 1900 Mon	499.00(a)
Commodore 128	207.00(a)
Commodore 128 + 1570 Disk Drive	345.00(a)
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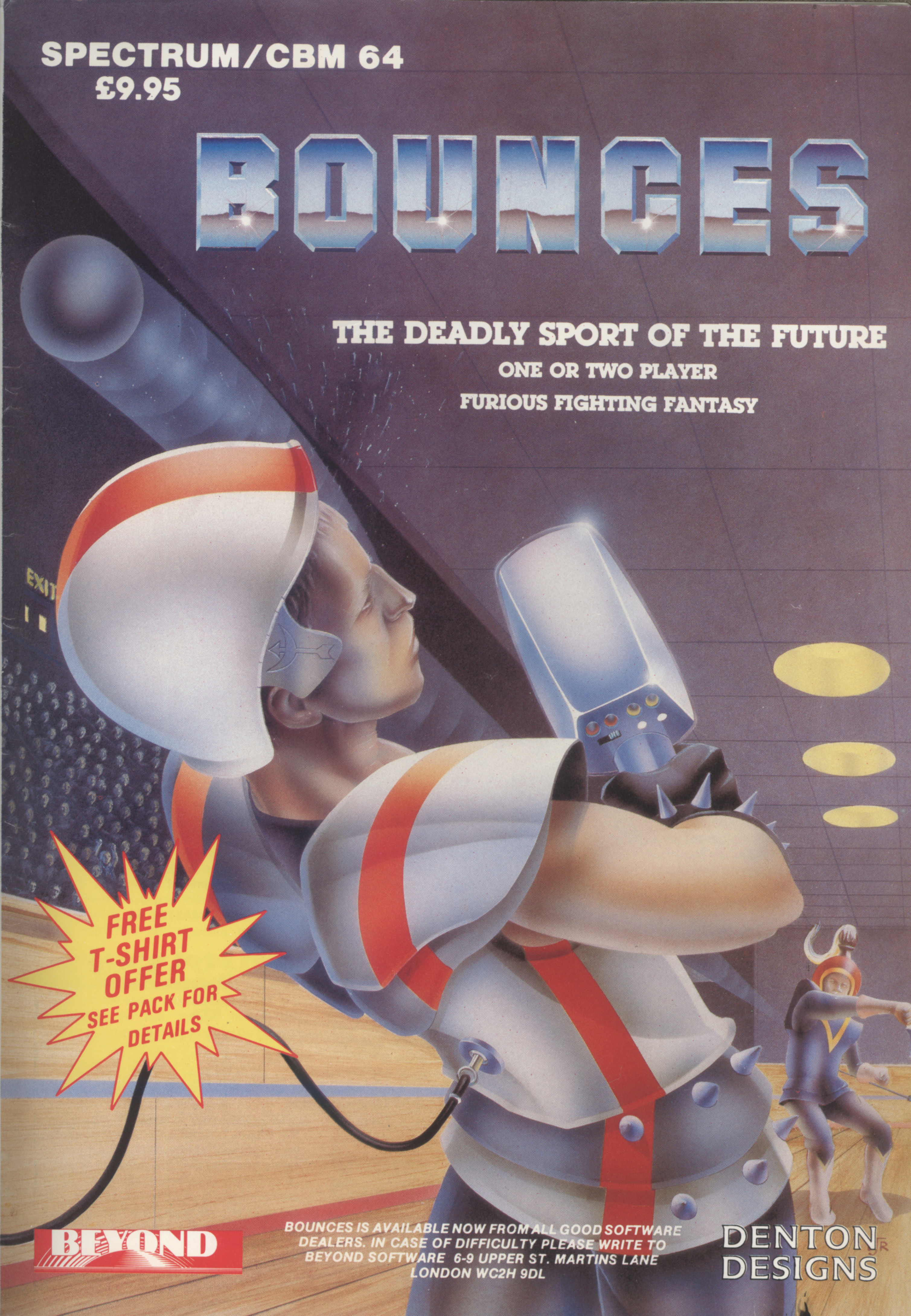
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